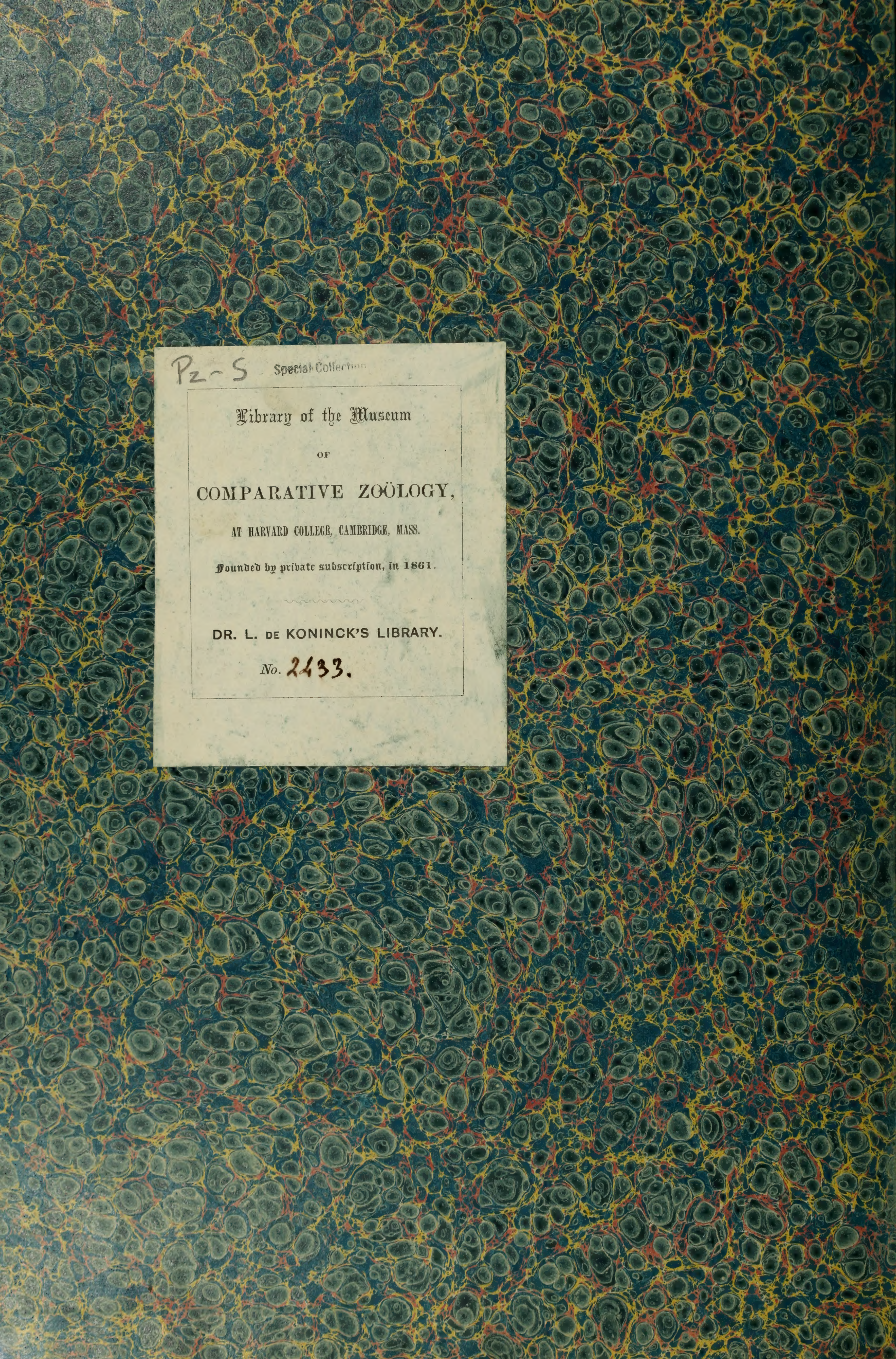
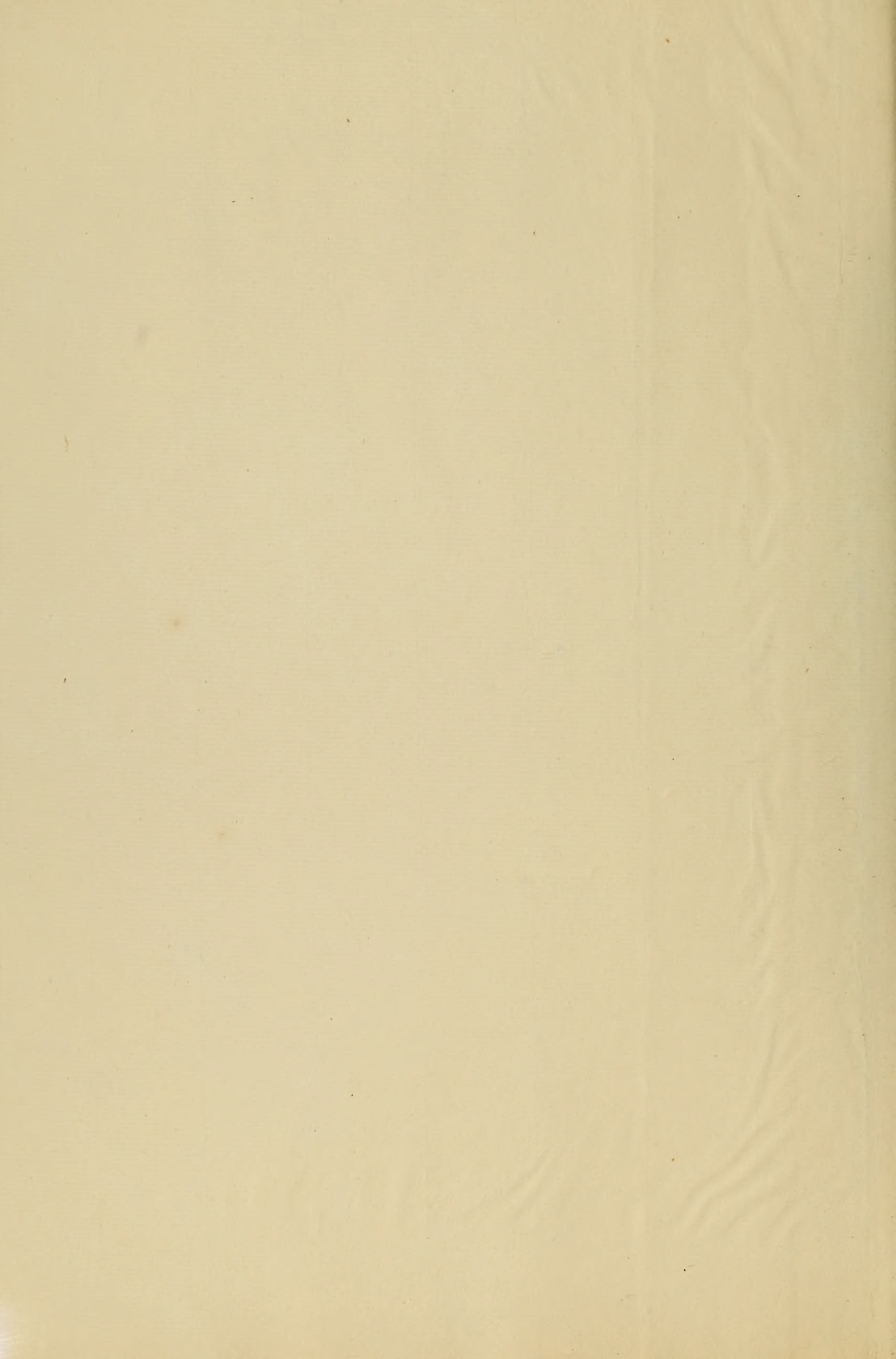
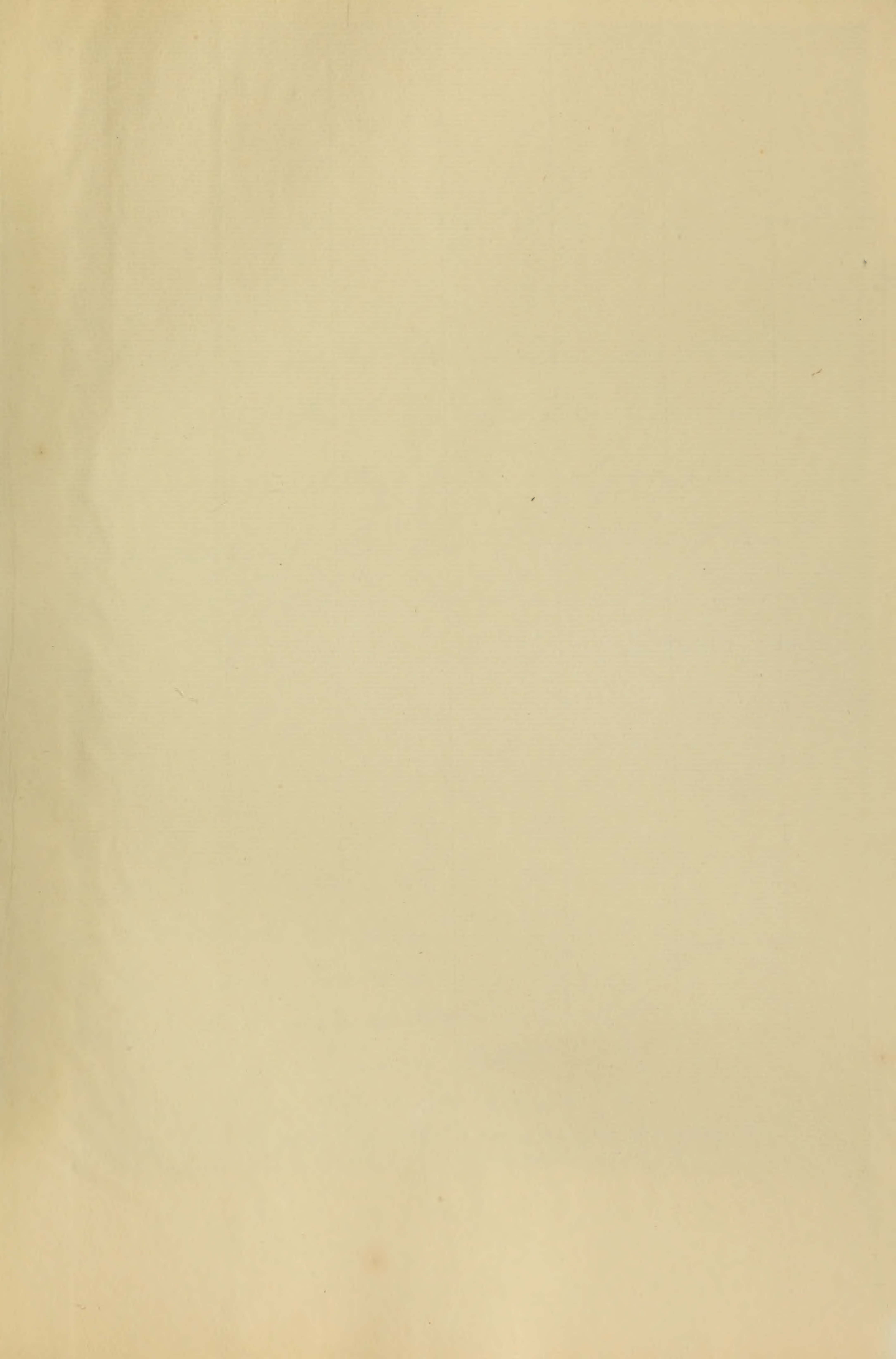
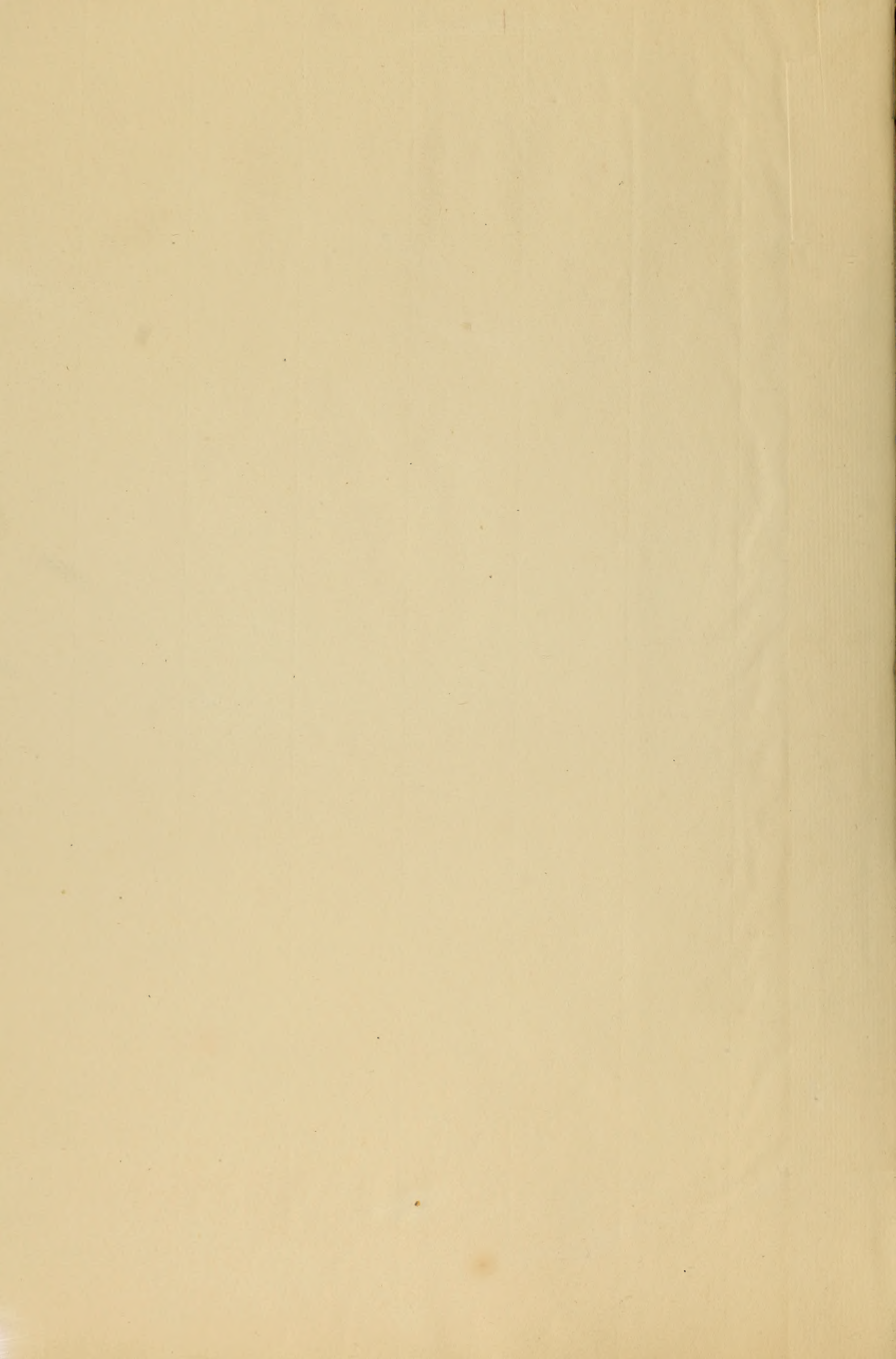












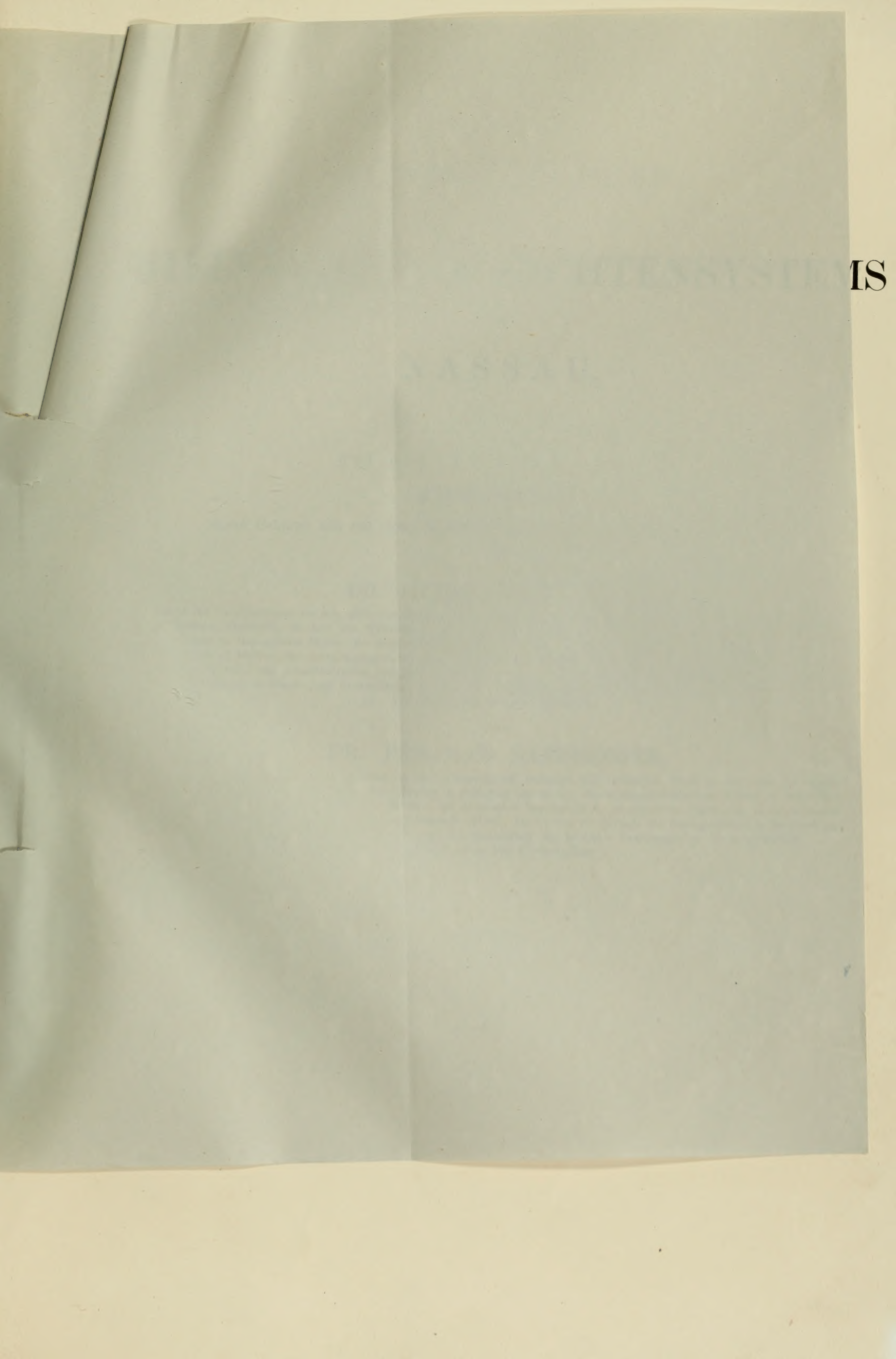
Hochzuverehrender Herr und Freund!

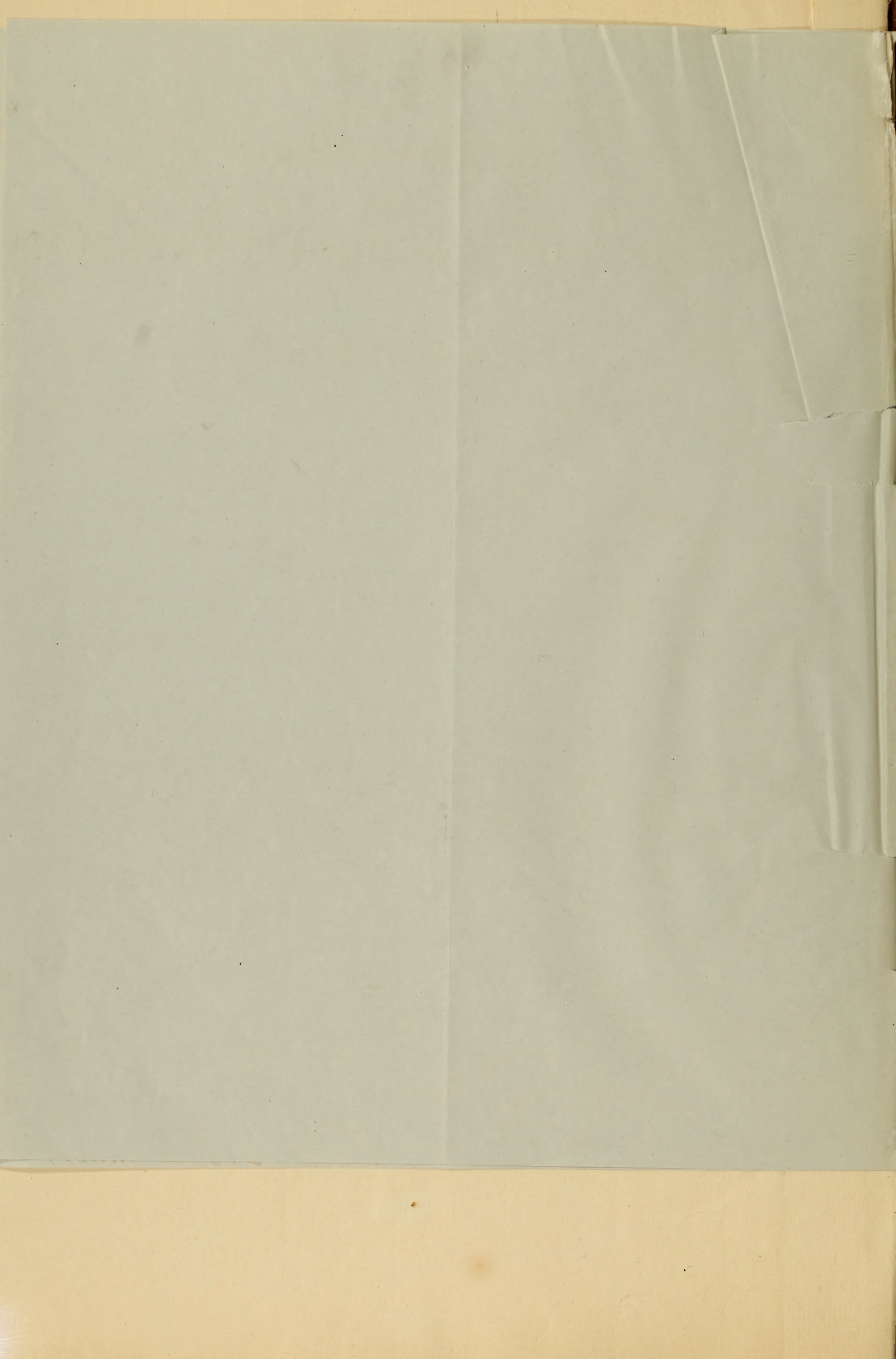
Sie erhalten anbei den Schluss des Atlasses von unserem Werke. Der Schluss des Textes wird in der nächsten Zeit nachfolgen.

Mein jüngerer Bruder, Fridolin, ist seit Neujahr Professor der Mineralogie und Geologie zu Carlsruhe an der polytechnischen Schule.

Dass ich seit August 1853 schwer krank war, habe Sie vielleicht vernommen. Es war ein acuter Rheumatismus. Noch heute habe ich einen Ueberrest der Krankheit im linken Arme behalten, dessen Functionen noch nicht in ihrer Vollständigkeit zurückgekehrt sind. Im Uebrigen bin ich schon seit einem Jahre wieder körperlich wohl und seit Juni 1854 wieder wissenschaftlich und im Lehramte beschäftigt. Mit unveränderter Gesinnung Ihr ergebenster Dr Guido Sandberger

IS





Die

VERSTEINERUNGEN

des

RHEINISCHEN SCHICHTENSYSTEMS

in

NASSAU.

Mit einer kurzgefassten

GEOGNOSIE

dieses Gebietes und mit steter Berücksichtigung analoger Schichten anderer Länder.

Von

DR. GUIDO SANDBERGER,

Lehrer der Naturgeschichte am herzoglich nassauischen Real-Gymnasium zu Wiesbaden, Mitgliede der Staatsprüfungscommissionen für Medicin, Pharmacie, Bergbau und Hüttenkunde, Forstwissenschaft, Architectur und Ingenieurwesen, sowie des Vereins für Naturkunde im Herzogthume Nassau, der deutschen geologischen Gesellschaft zu Berlin, der kaiserlich russischen naturforschenden Gesellschaft zu Moskau, des rheinpreussischen naturforschenden Vereins zu Bonn, der schlesischen Gesellschaft für vaterländische Cultur zu Breslau, des mittelrheinischen geologischen Vereins zu Darmstadt, der Pollichia, der oberhessischen naturforschenden Gesellschaft zu Giessen, der wetterauischen zu Hanau, der rheinischen Naturforscher-Gesellschaft zu Mainz wirklichem, correspondirendem oder Ehren-Mitgliede,

und

DR. FRIDOLIN SANDBERGER,

Professor der mineralogischen Wissenschaften an der grossherzoglich badischen polytechnischen Schule zu Carlsruhe, des Vereins für Naturkunde im Herzogthum Nassau, der deutschen geologischen Gesellschaft, des zoologisch-botanischen Vereins zu Wien, der kaiserlichen naturforschenden Gesellschaft zu Moskau, der schlesischen Gesellschaft für vaterländische Cultur, der naturforschenden Gesellschaften zu Hamburg, Hanau, Giessen und Neustadt a/Hardt, des Vereins der Freunde der Naturgeschichte in Mecklenburg, des Vereins für Erdkunde zu Darmstadt und der Gesellschaft für nützliche Forschungen zu Trier wirklichem, correspondirendem oder Ehrenmitgliede.

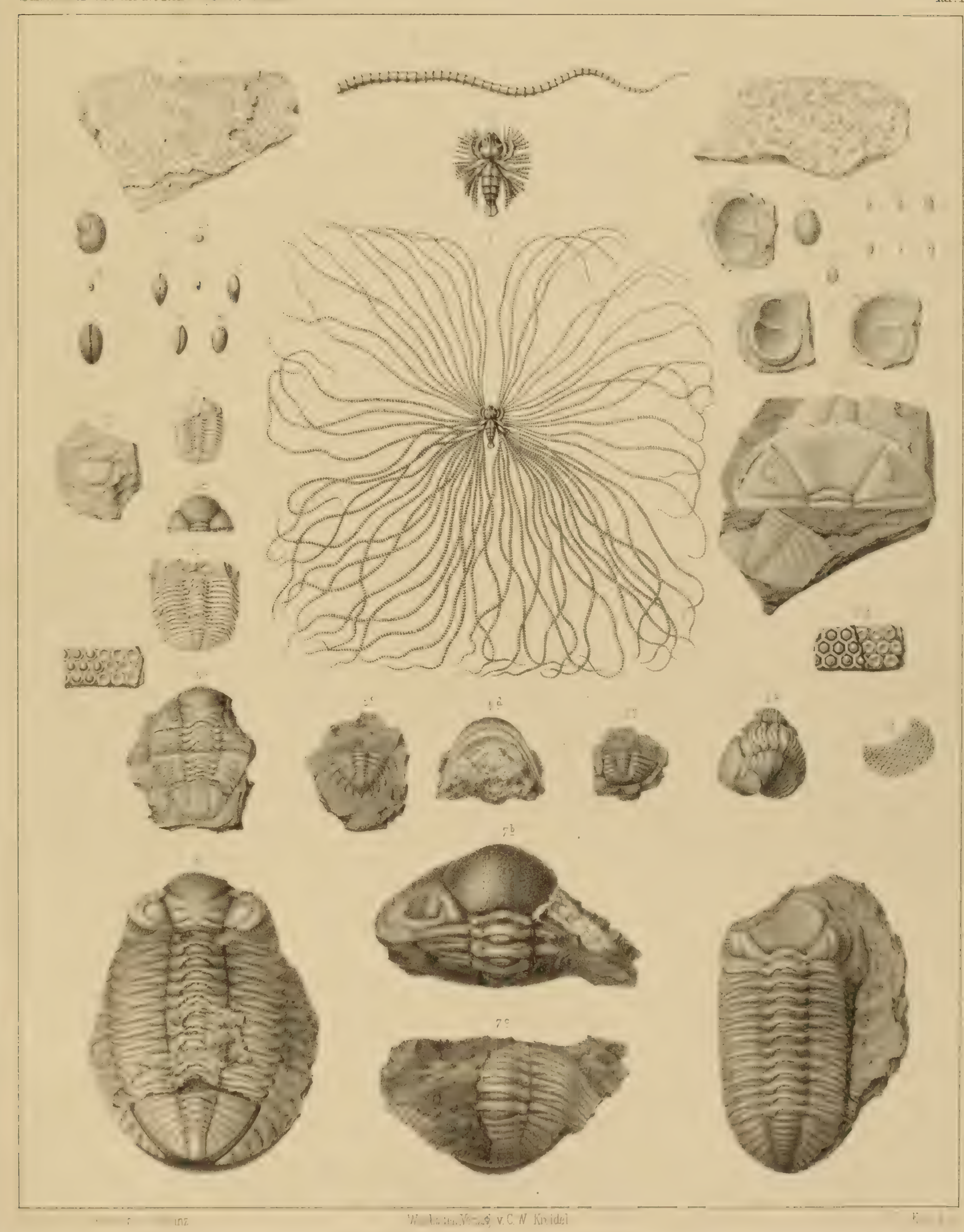
Atlas.

Enthält XLI Tafeln.

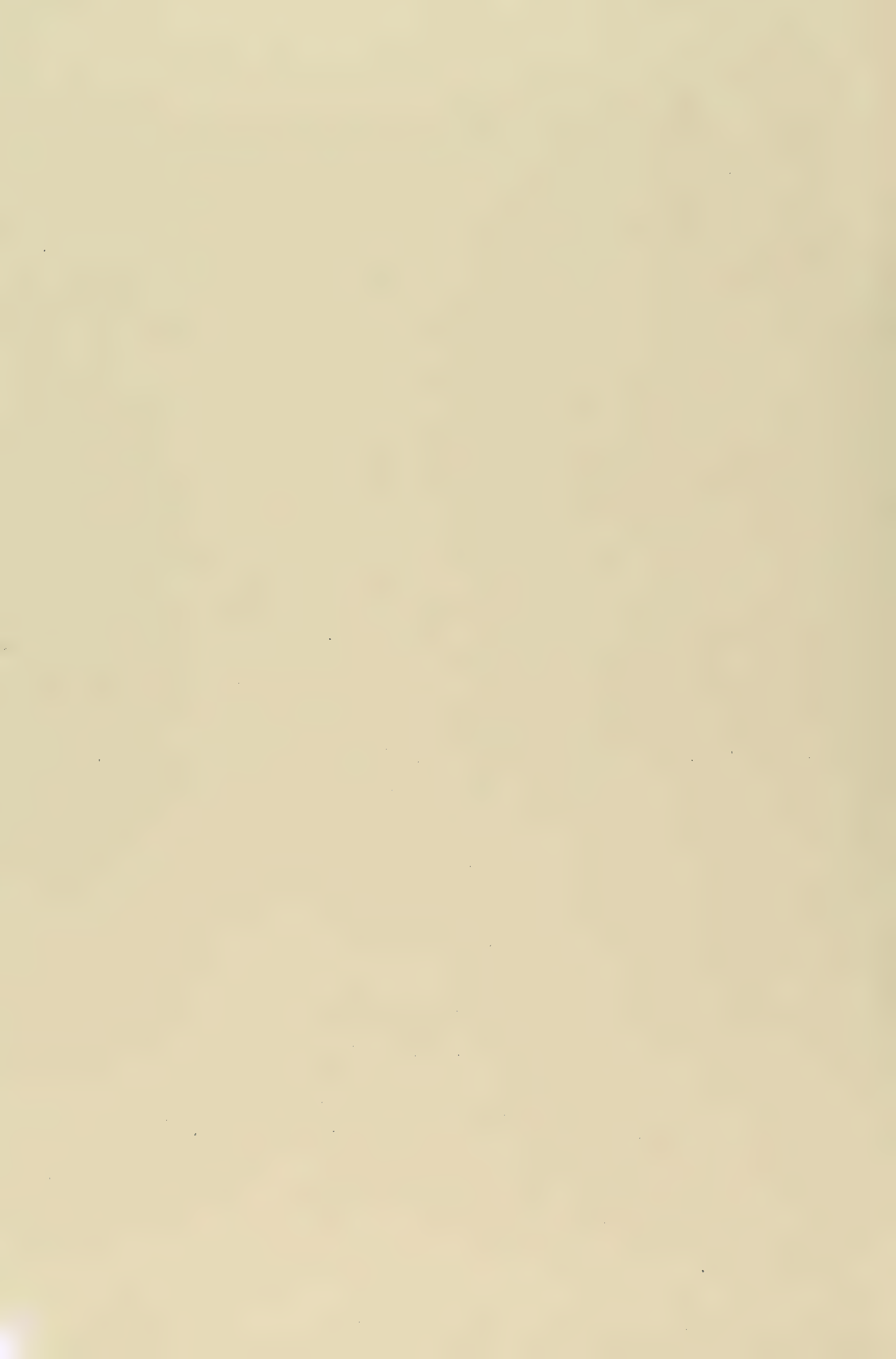
WIESBADEN:

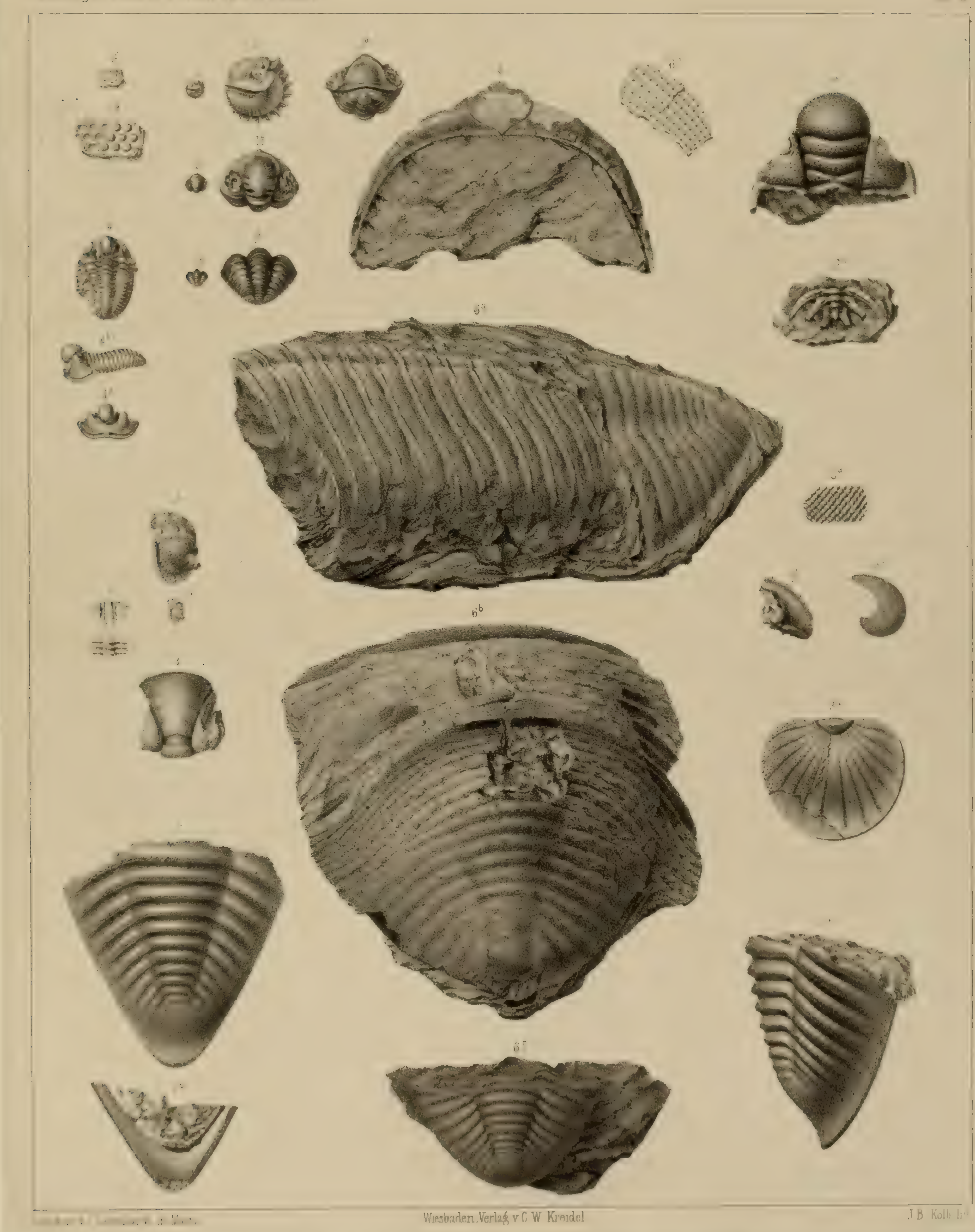
KREIDEL & NIEDNER, VERLAGSHANDLUNG.

1850 — 1855.



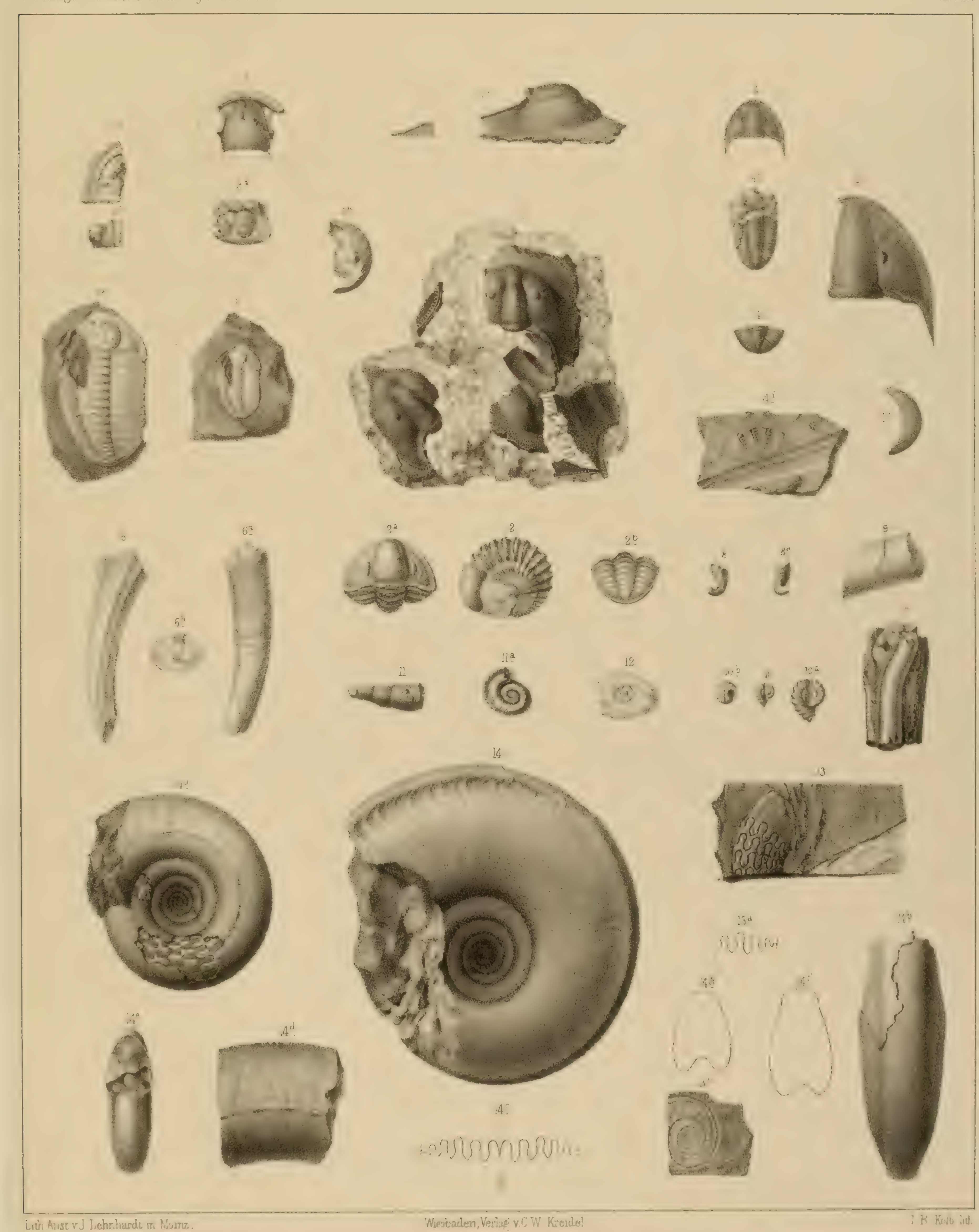
v. C. W. Kreidel





alonotus crassicauda. Sa





Lith. Anst. v. J. Lehnhardt in Mainz. Wiesbaden, Verlag v. C. W. Kreidel. J. B. Kolb lit.

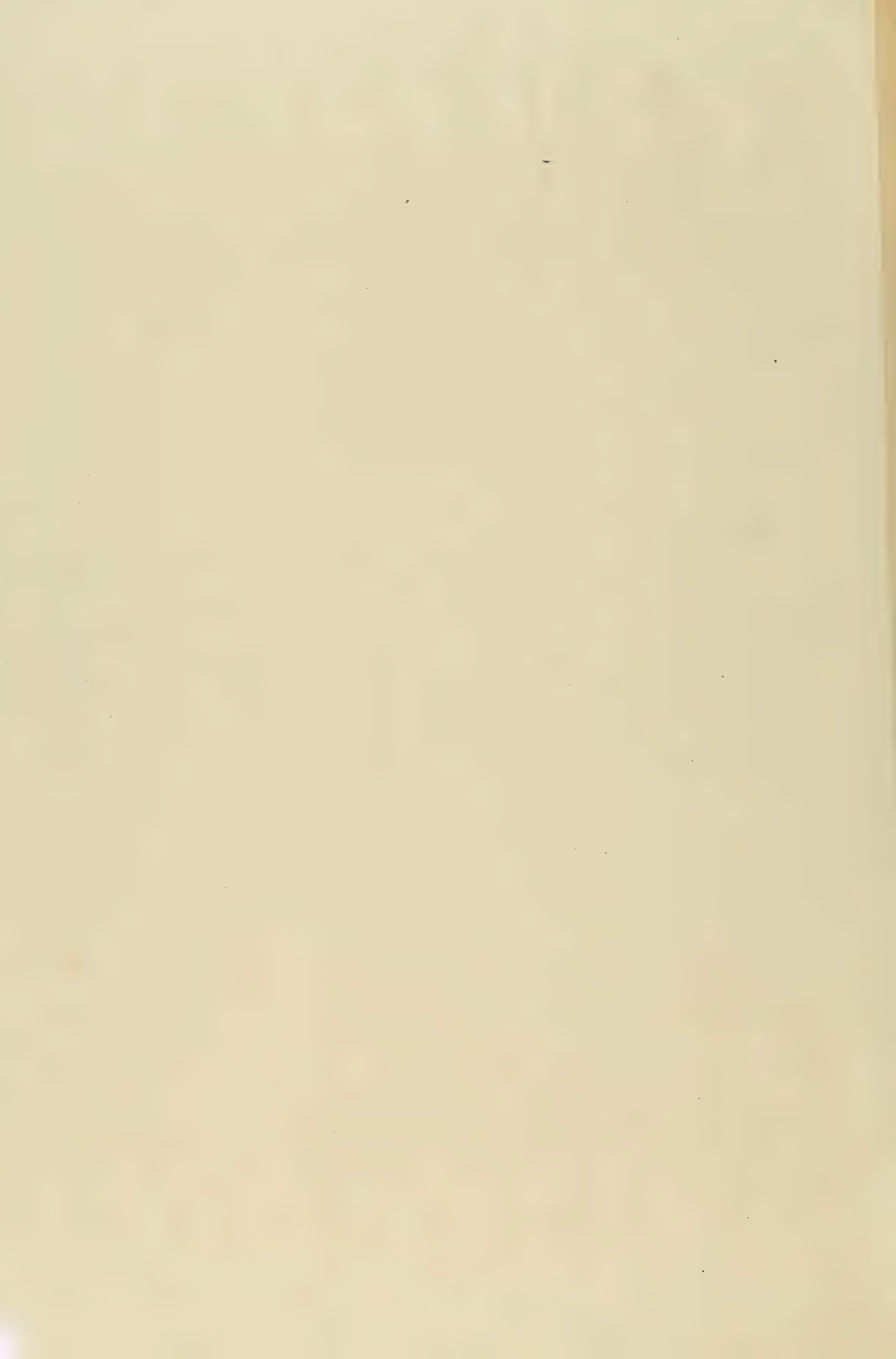
1 Harpes gracilis, Sandb.
2. Trigonaspis laevigata, Goldf. sp.
3 ——— ? cornuta, id. sp.
4 Cylindraspis latispinosa, Sandb.
5 Cylindraspis macrophthalmus, Sandb.
6 Serpula semiplicata, id.
7 ——— undulata, id.
8 ——— corniculum, id.
9 Serpula (indeterm.)
10 ——— lirata, Sandb.
11 Spirorbis gracilis, id.
12 ——— ammonia, Goldf. sp.
13. Goniatites mixolobus, Phill.
14. Goniat. lunulicosta, Sandb.

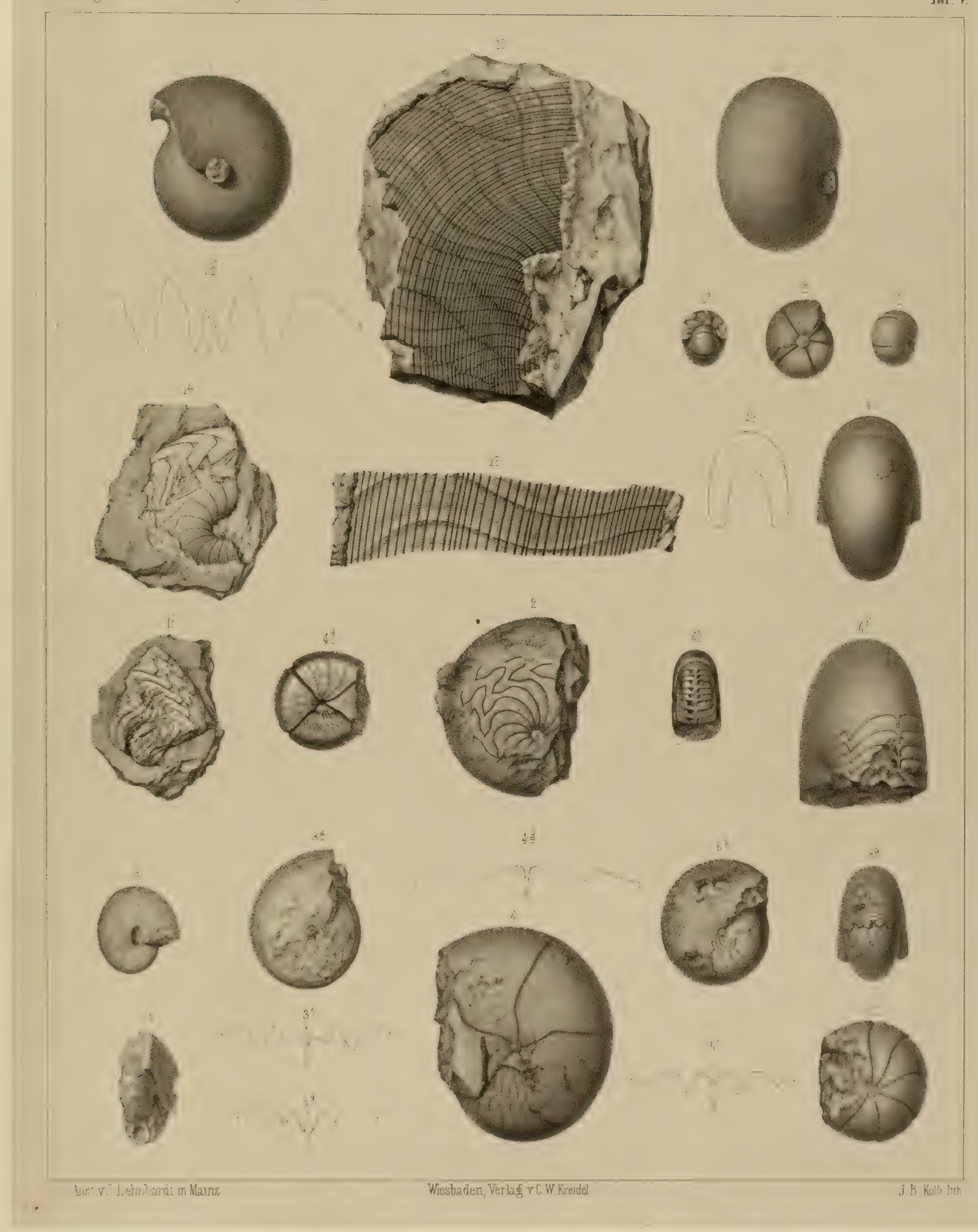




Lith Anst v J Lehnhardt in Mainz — Wiesbaden, Verlag v C W Kreidel — A Kolb lith

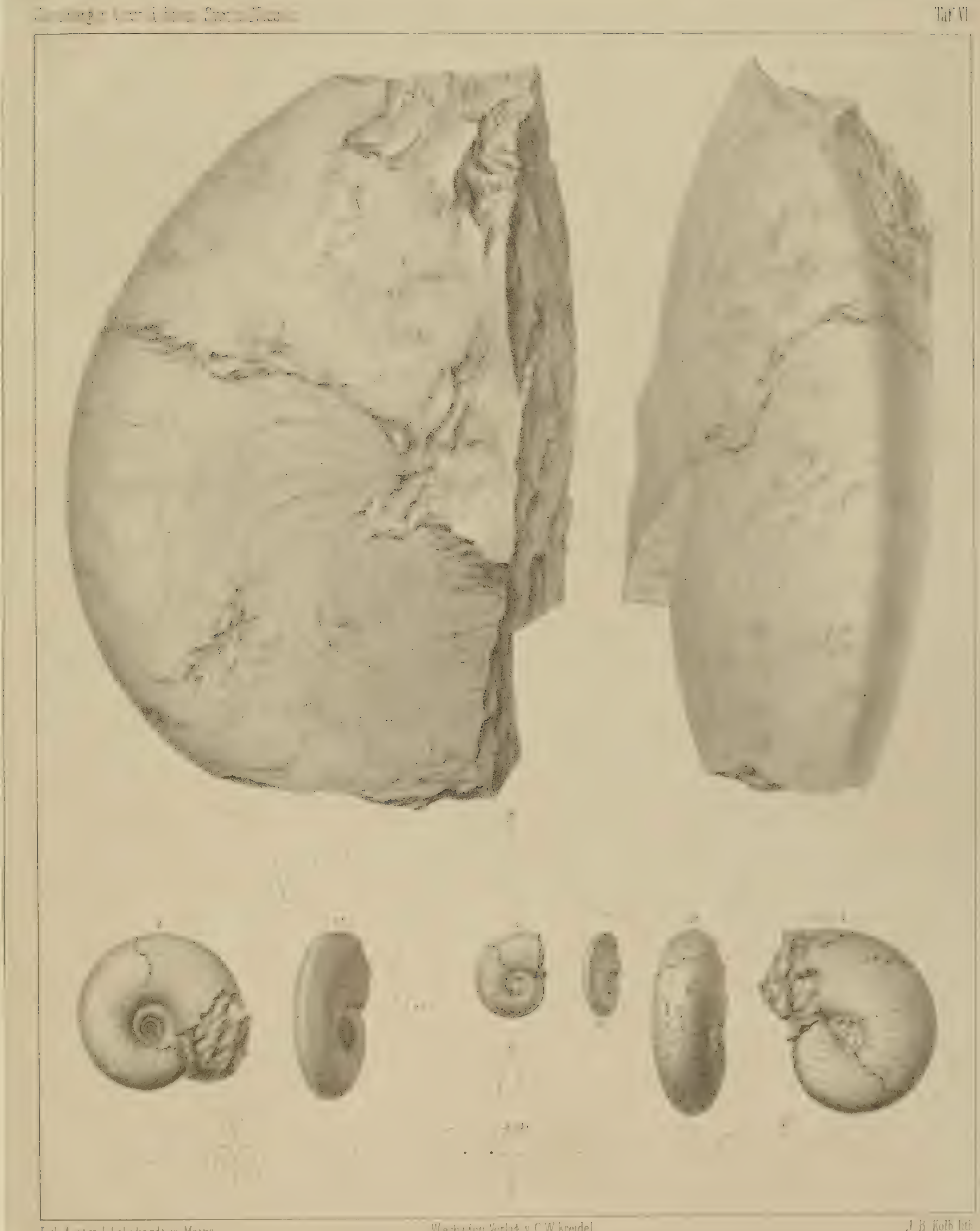
1 *Goniatites tuberculoso-costatus, D'Arch. et De Vern.*
2 ——— *tridens, Sandb.*
3 ——— *sagittarius, id.*





1. Goniatites crenistria, Phill.
2. [illegible]
3. Goniatites terebratus, Sandb.
4. [illegible] umbilicatus [illegible]
5. Goniatites mamillifer, Sandb.



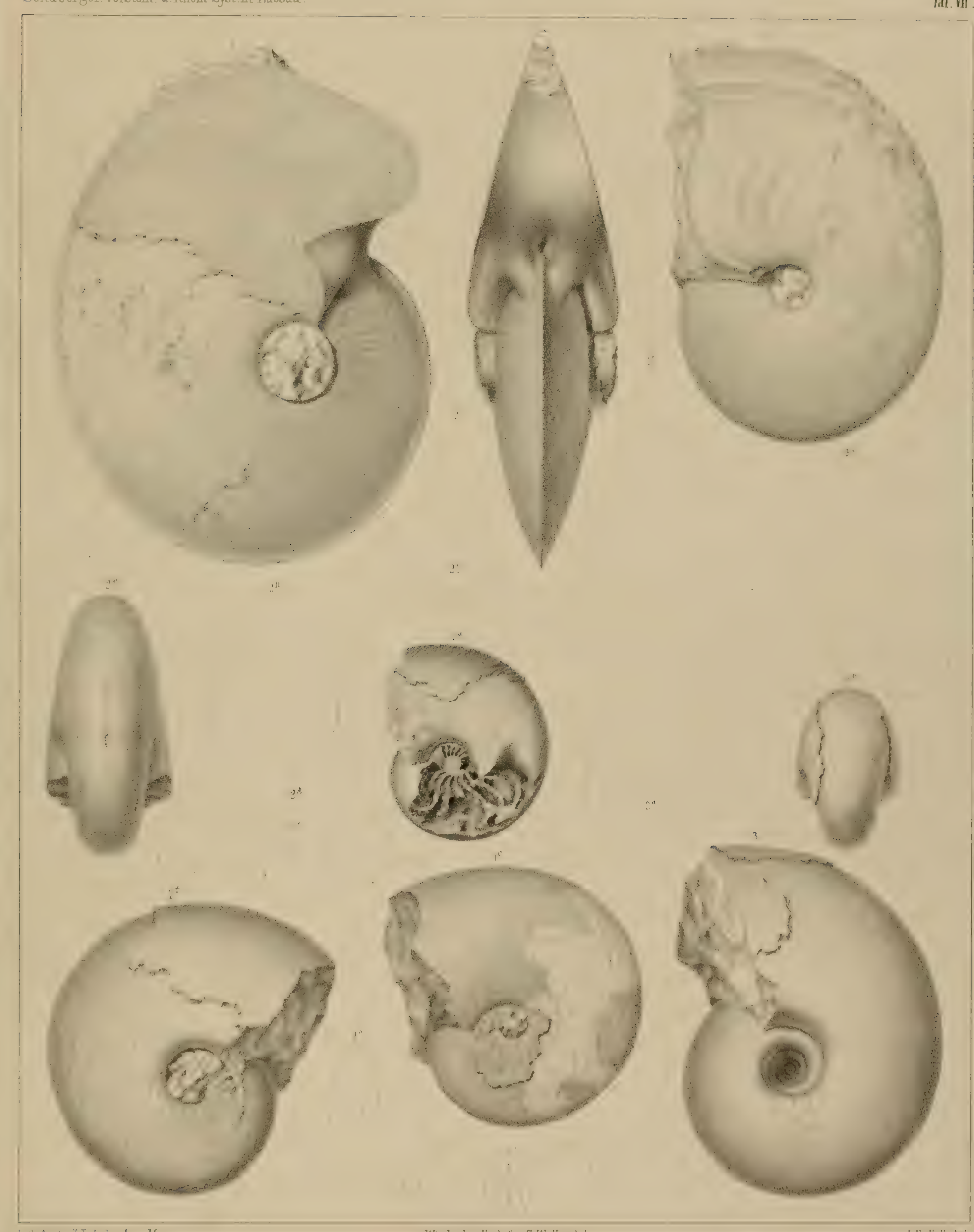


Lith Anst v J. Lehnhardt in Mainz. — Wiesbaden Verlag v C W Kreidel. — J. B. Kolb lith.

1 *Goniatites acuto-lateralis*, Sandb. — 2 ——— *sublamellosus*, id.

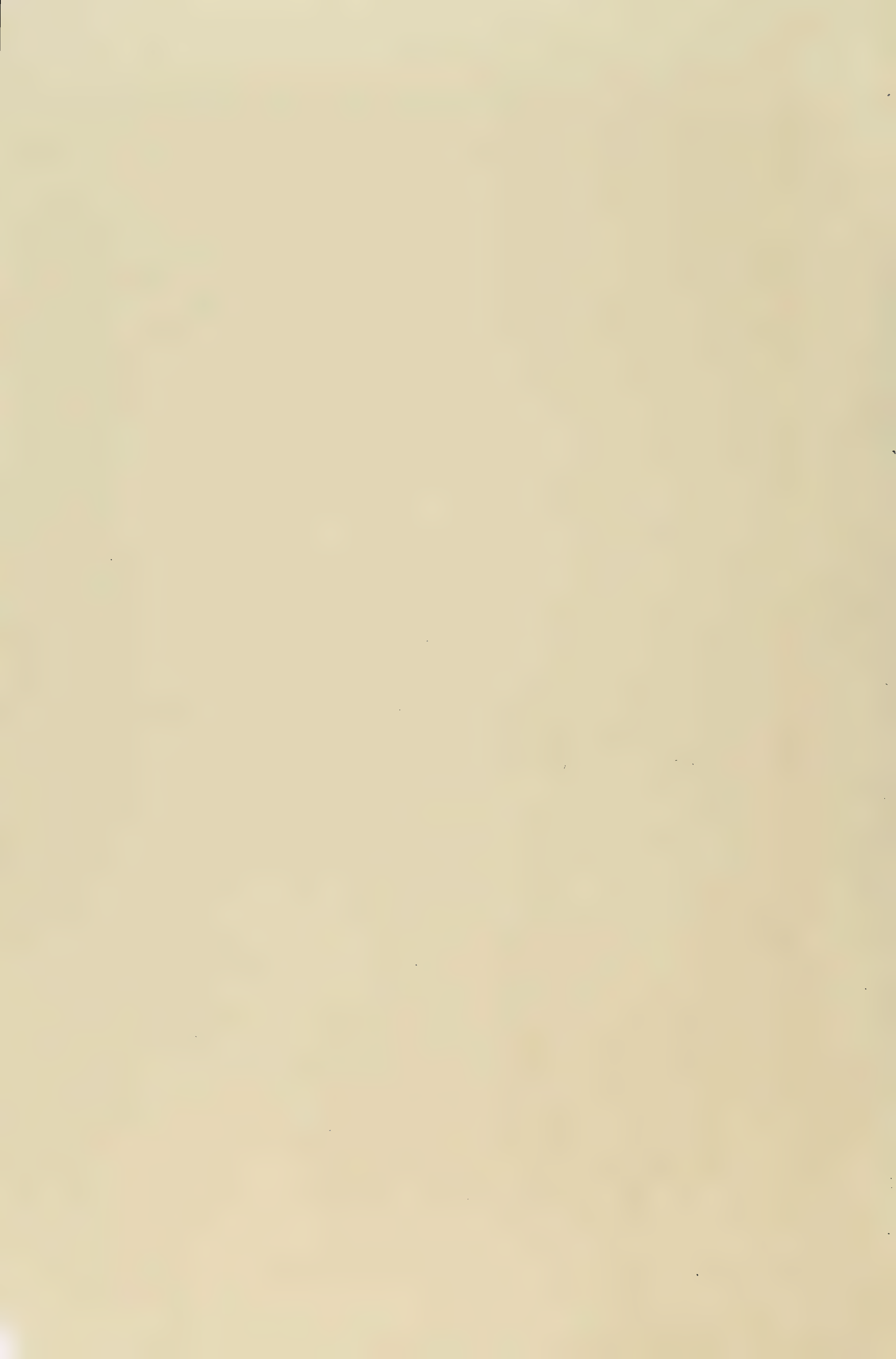
3 *Goniatites forcipifer*, Sandb. — 4 ——— *carinatus*, Beyr.



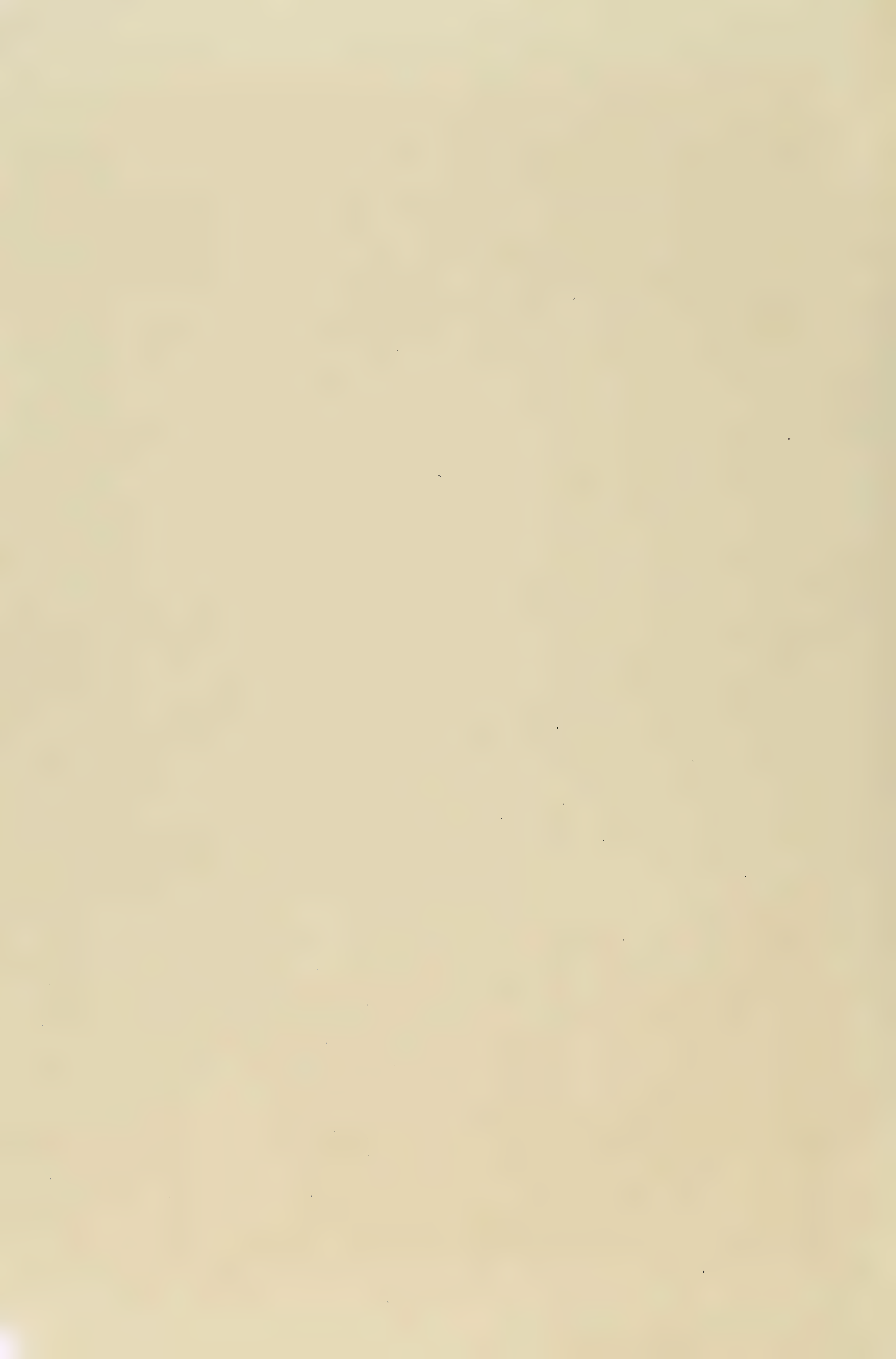


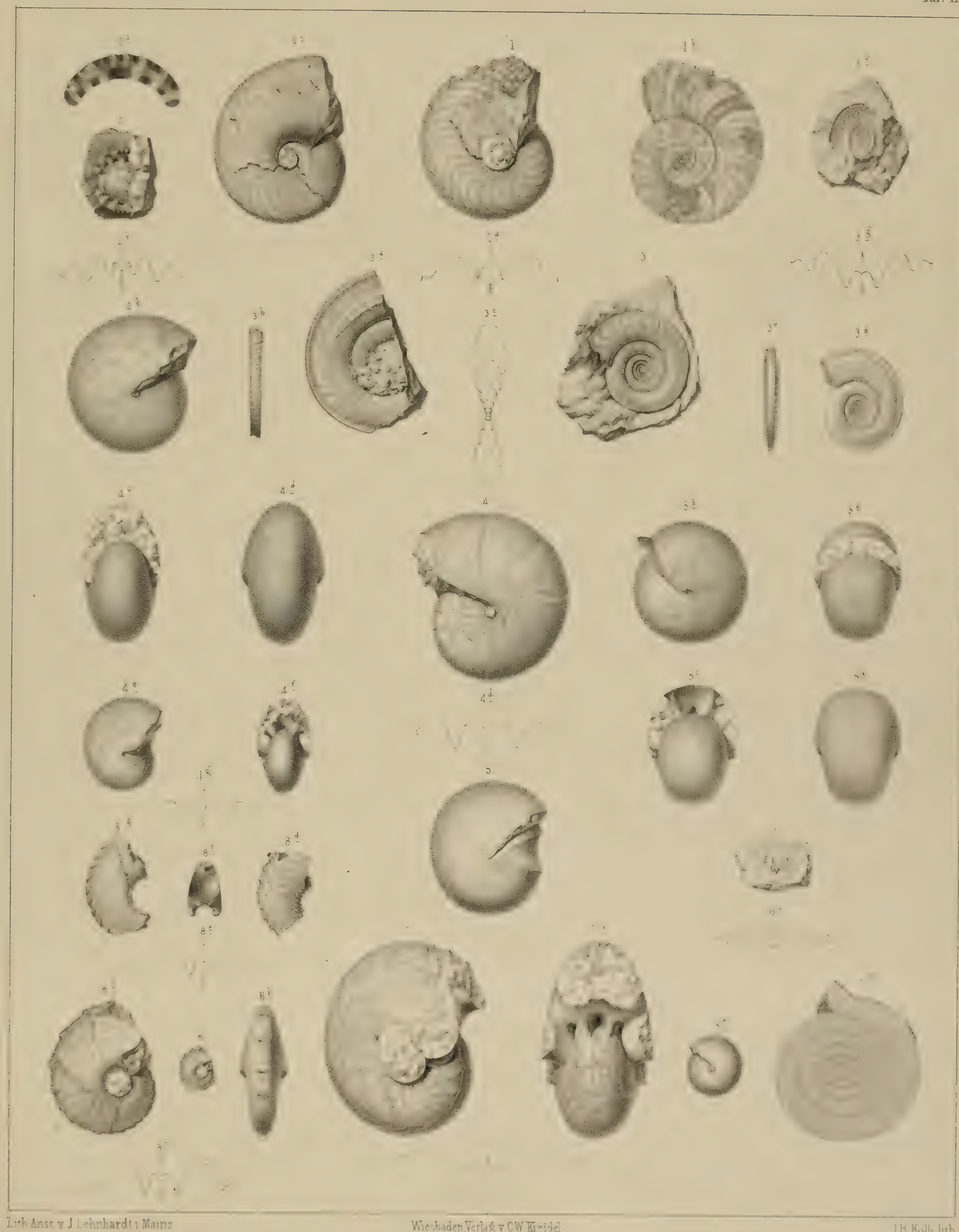
Lith. Anst. v. J. Lehnhardt in Mainz. Wiesbaden, Verlag v. C. W. Kreidel. J. B. Kolb lith.

1. 2. 3. *Goniatites intumescens, Beyr. (Varietates.)*

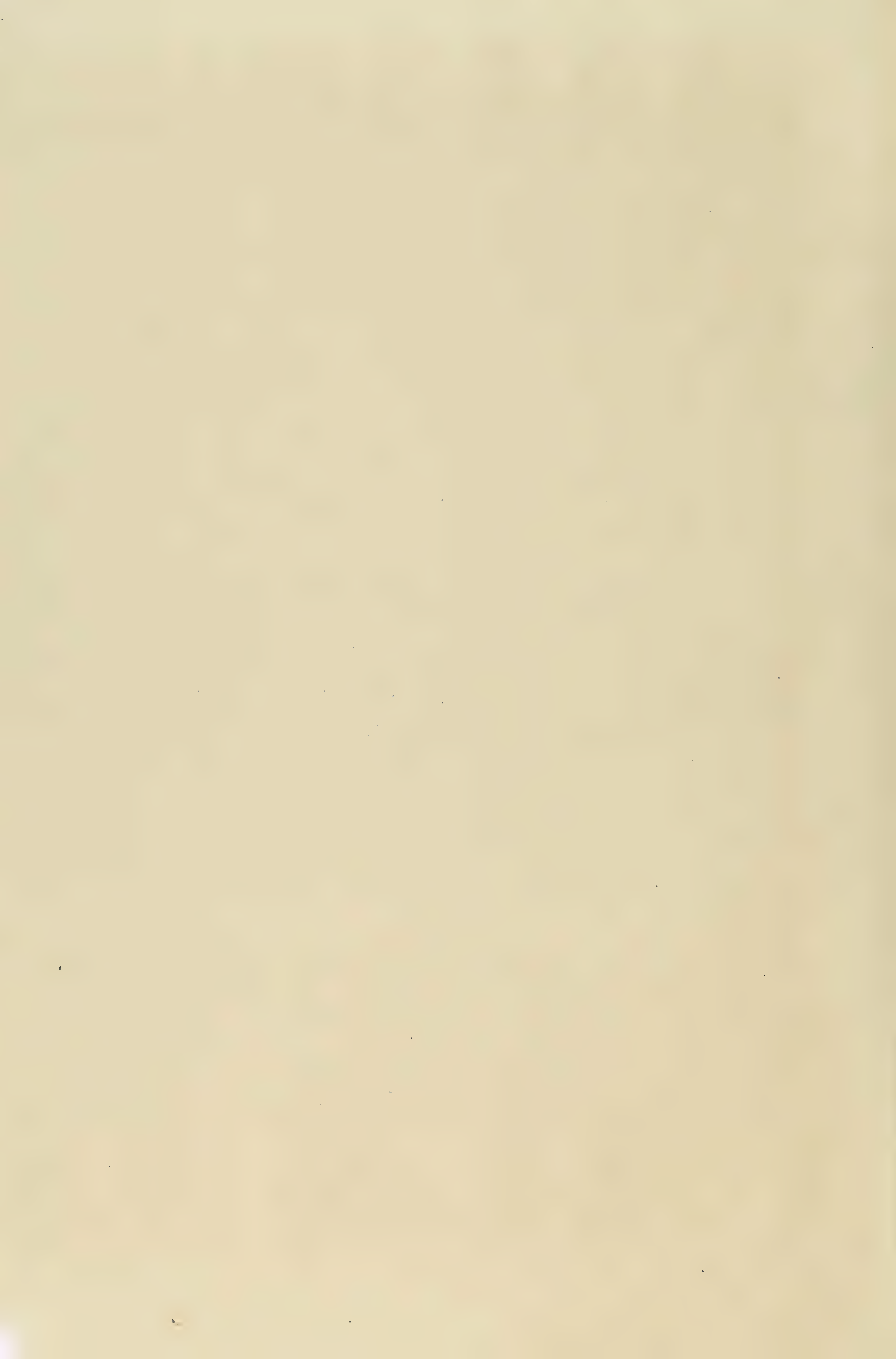








1. *Goniatites carinatus, Beyr.*	5. *Goniatites bifer. Phill. Var. Delphinus Sandb.*
2. ——— *tridens, Sandb.*	6. ——— *mixolobus. Phill.*
3. ——— *Planorbis, id.*	7. ——— *bilanceolatus. Sandb.*
4. ——— *bifer. Phill.*	8. ——— *serratus. Stein.*





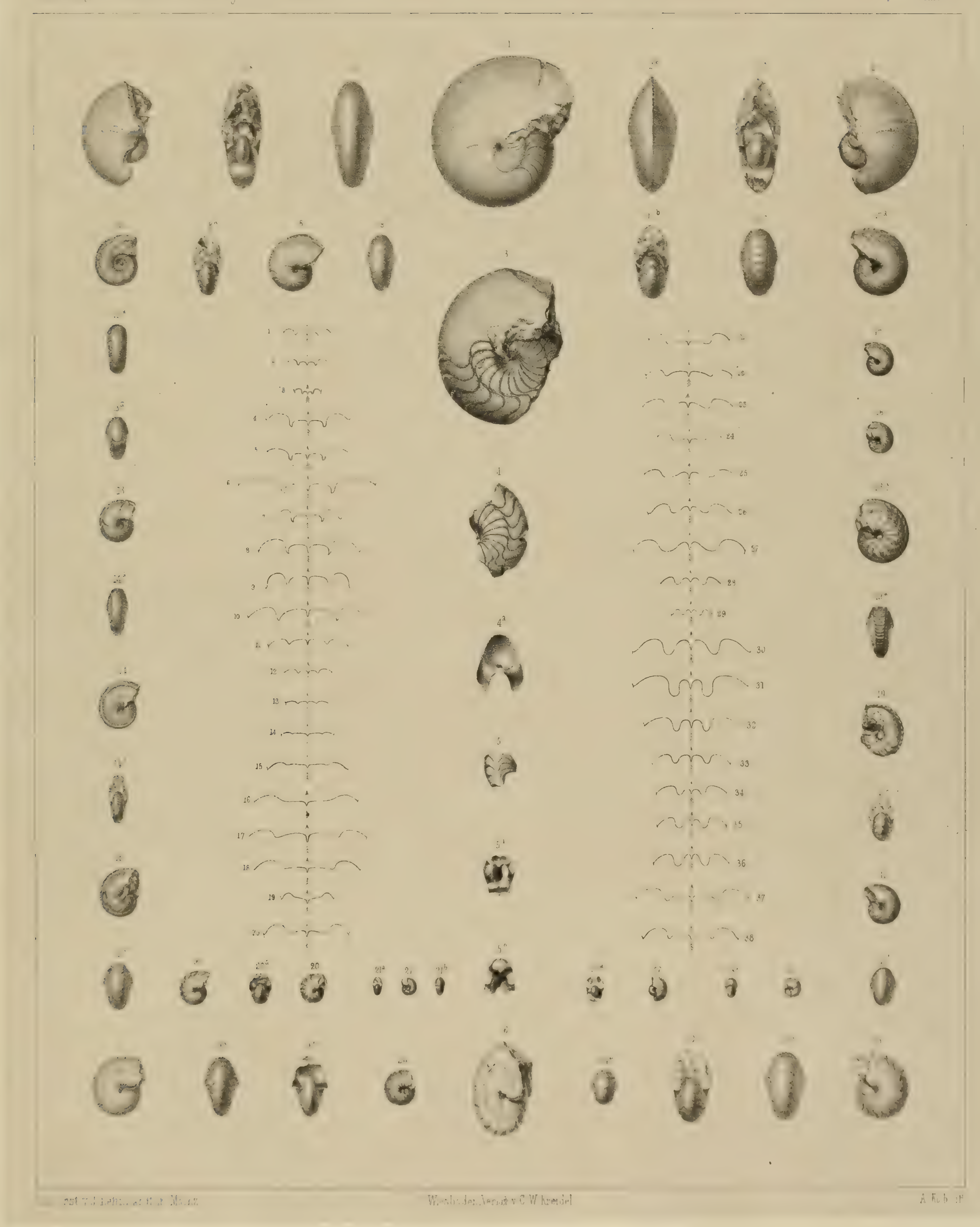
Goniatites retrorsus, v. Buch

curvispina. | 6 & 7 *planilobus* | 11, 12 & 13. *a*

angulatus | 9. *circumflexus.* | 17, 18 & 19 *undulatus*

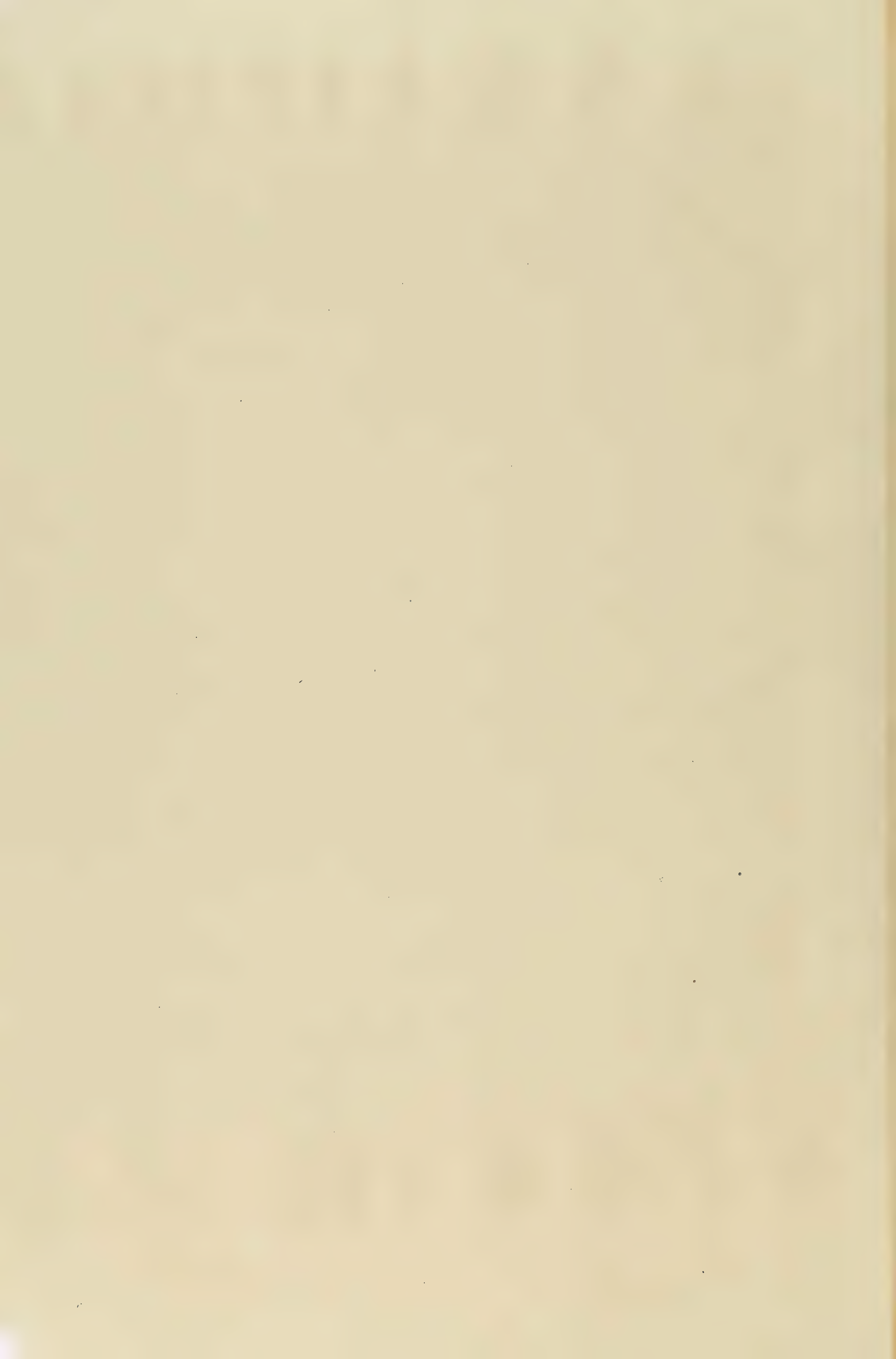
20 & 21. *lingua* 22 *sacculus*

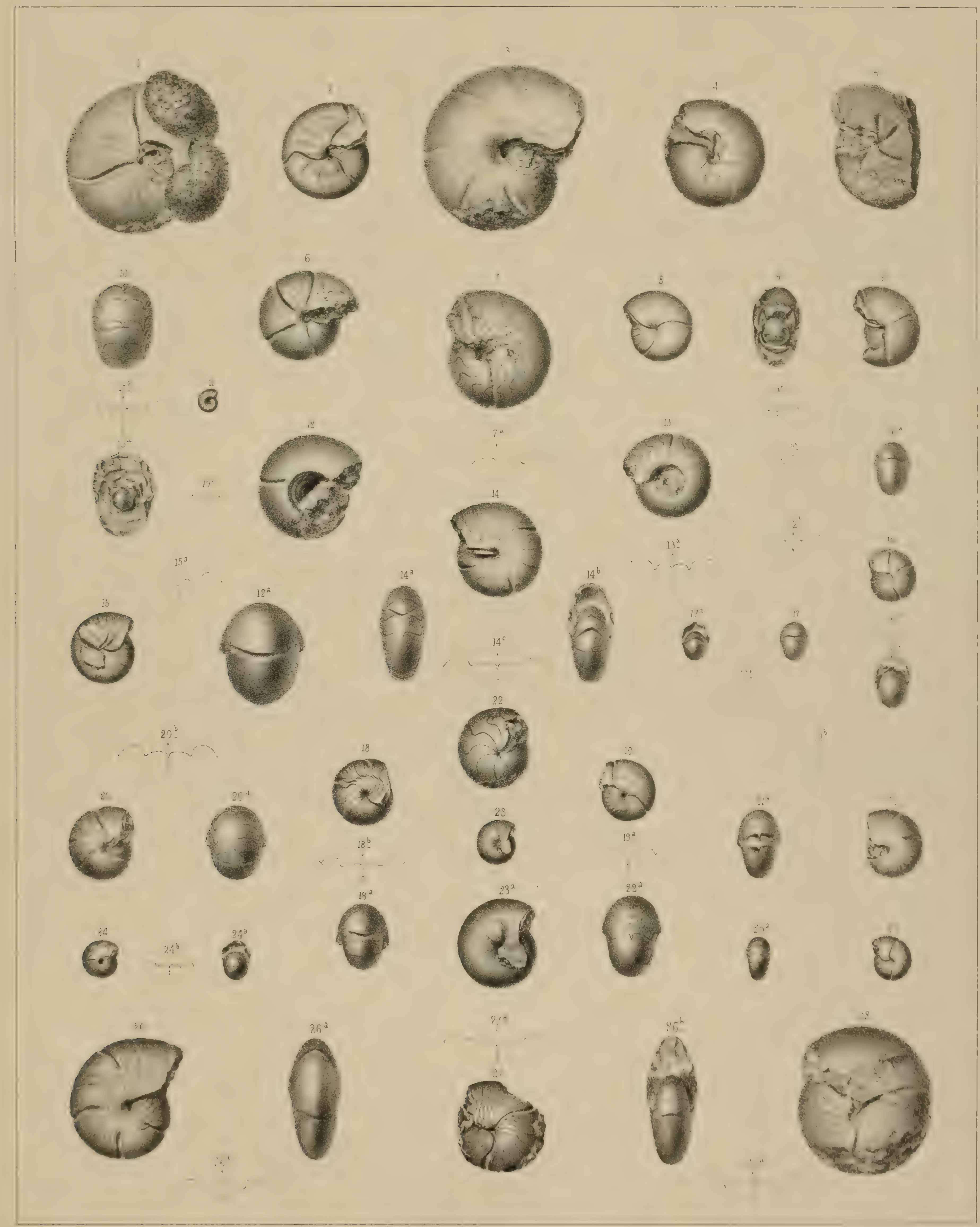




Wiesbaden, Verlag v. C. W. Kreidel

Goniatites retrorsus, v. Buch





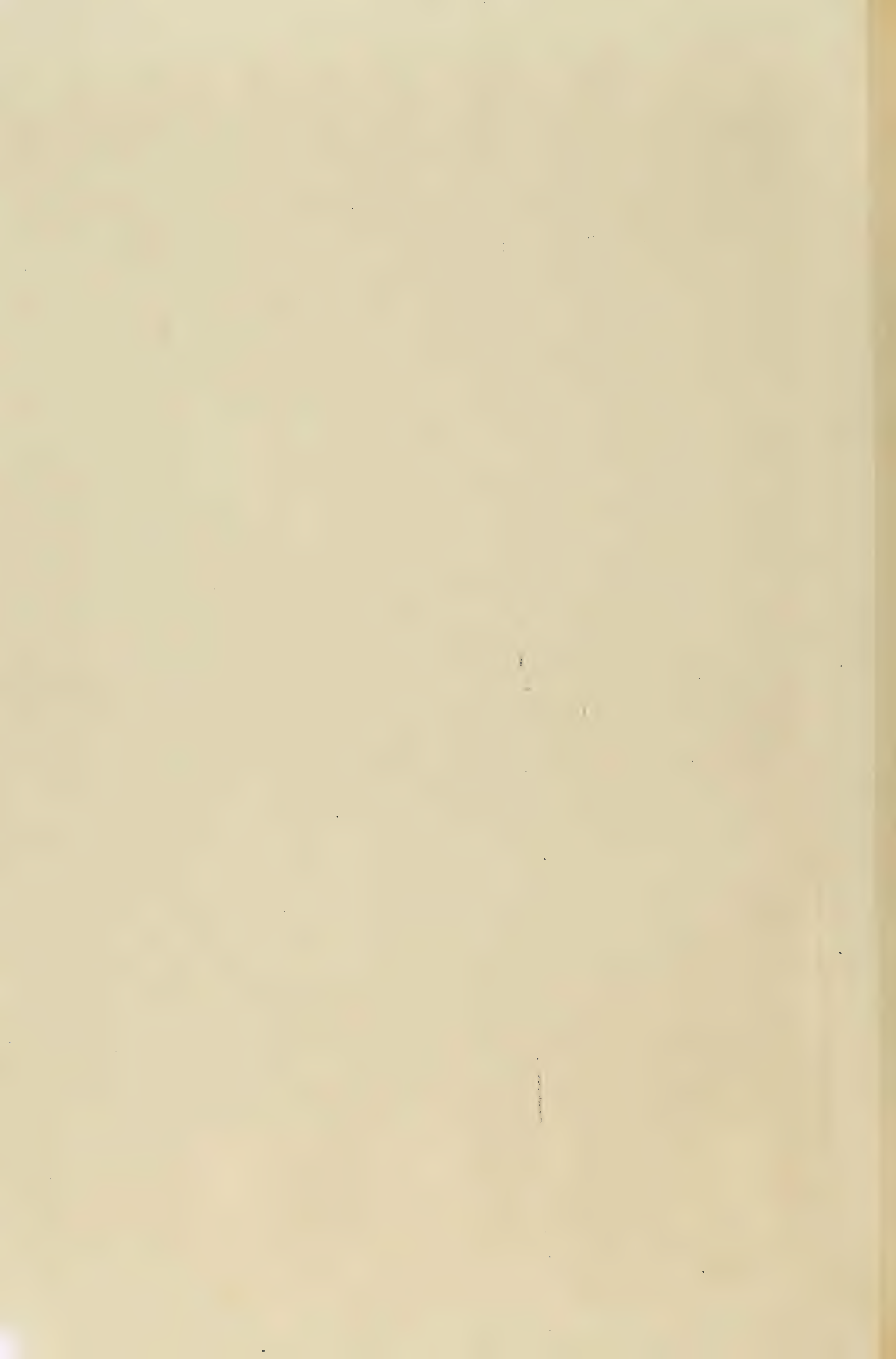
Lith Anst v J Lehnhardt in Mainz. Wiesbaden, Verlag v. C.W. Kreidel A. Kolb lith.

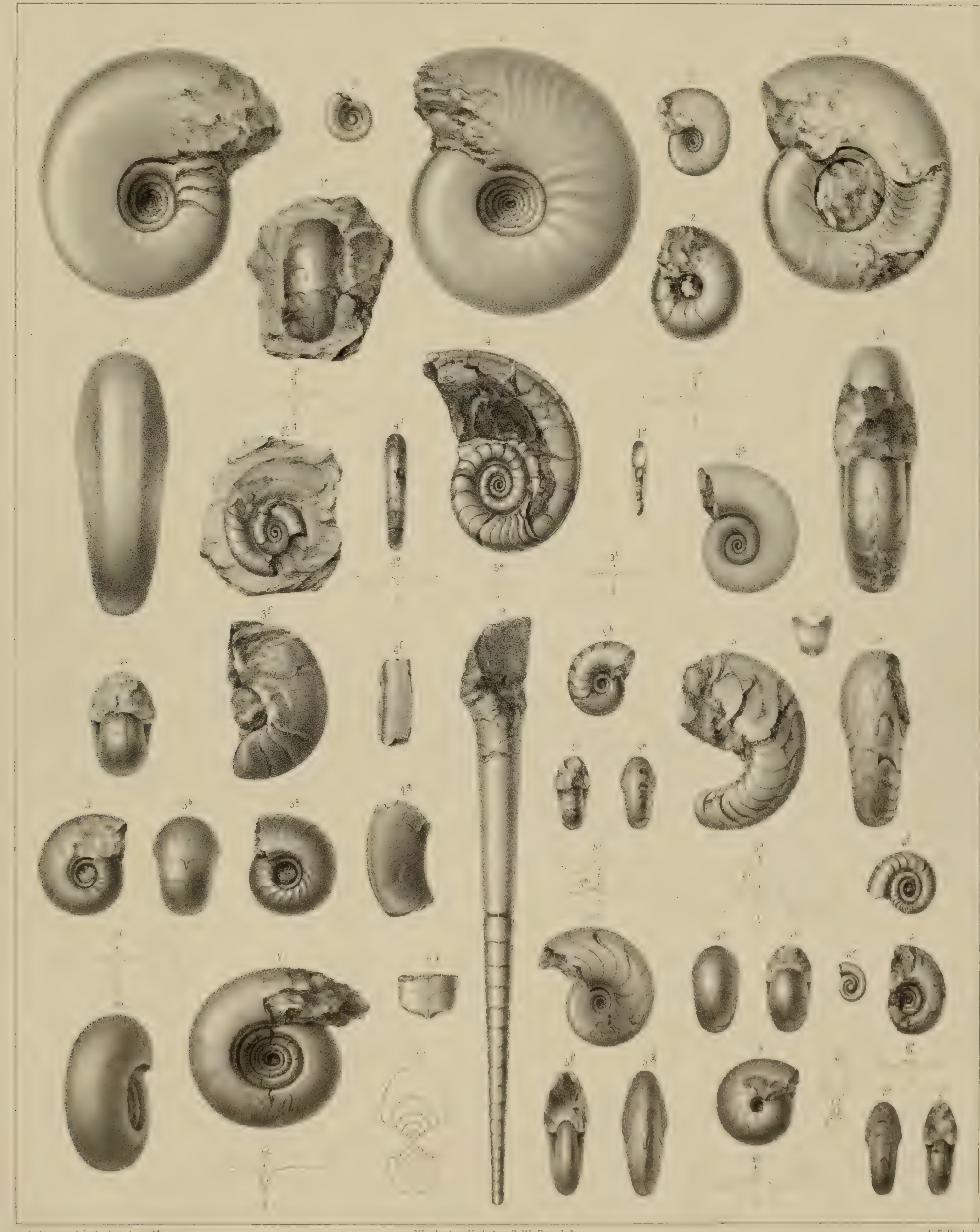
Goniatites retrorsus, v. Buch.

8; 14 & 15; 18 & 19; 21; 23; 25 amblylobu[illegible]

7. 20. 22. sacculus. | *11 12 13 umbilicatus.* | *26 circum[illegible]*

16 17 biarcuatus | *9. 10. 24. 28 curvispina* | *27. [illegible]*

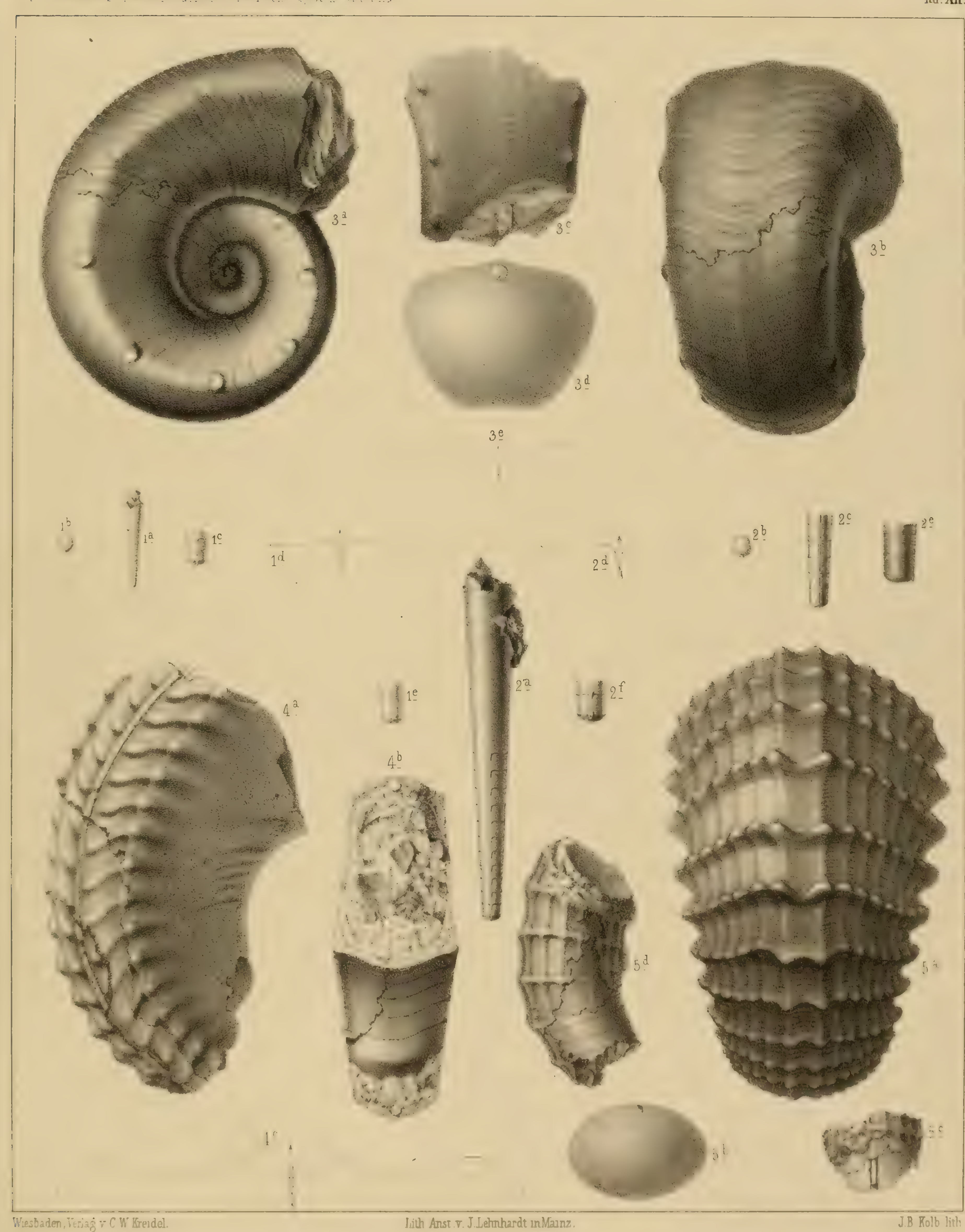




Lith. Anst. v. J. Lehnhardt in Mainz. Wiesbaden, Verlag v. C. W. Kreidel. A. Kolb lith.

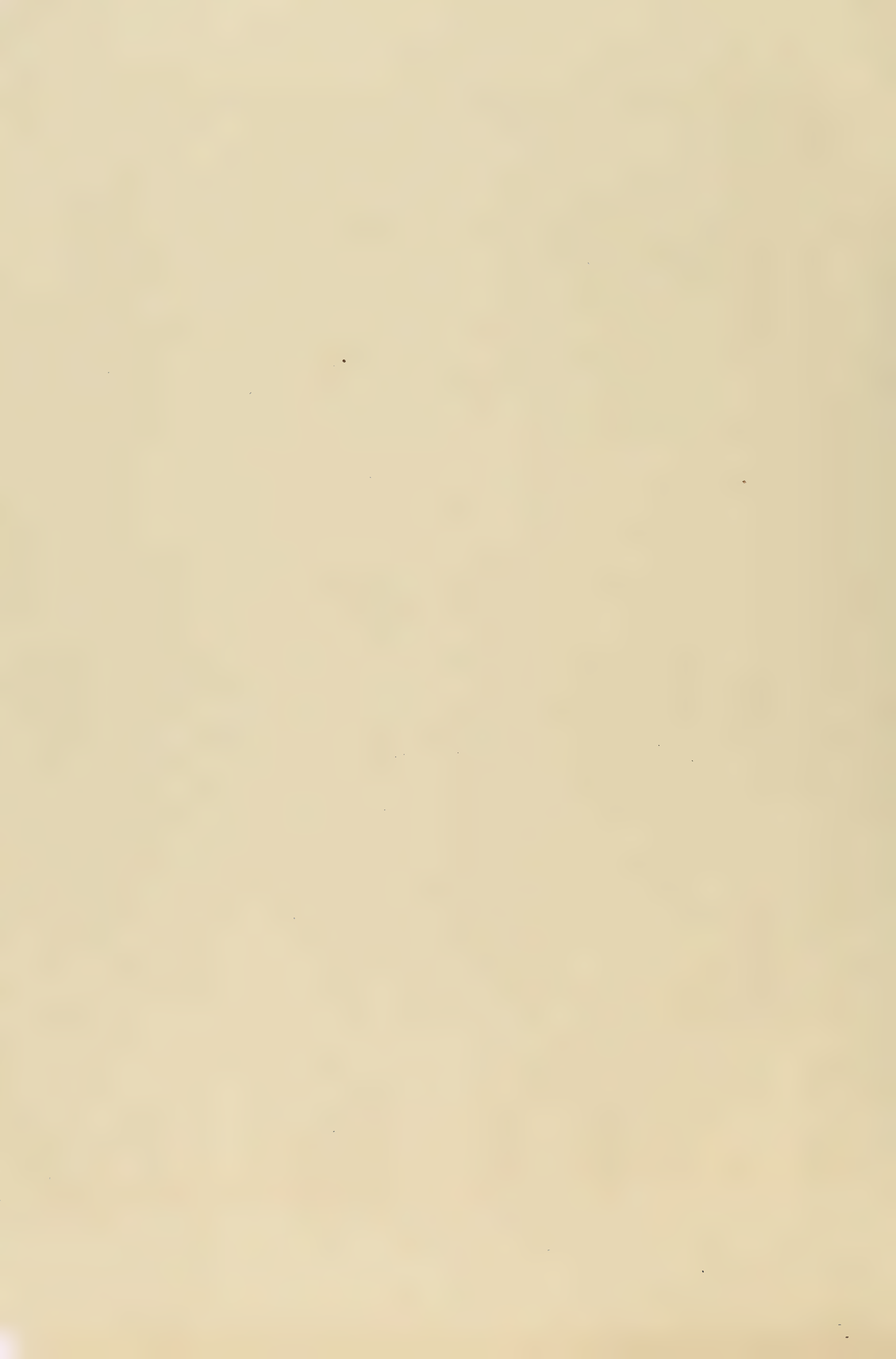
1. *Goniatites subnautilinus* Schloth. sp.
2. ——— *var. convolutus.* Sandb.
3. ——— *var. vittiger,* id.
4. *Goniatites compressus,* Beyr.
5. ——— *bicanaliculatus.* Sandb.
6. ——— *var. gracilis,* id.
7. *Goniatites lateseptat*…
8. ——— *circumflexifer.* Sandb.
9. *Bactrites gracilis,* id.





Wiesbaden, Verlag v. C. W. Kreidel. Lith. Anst. v. J. Lehnhardt in Mainz. J. B. Kolb lith.

1. *Bactrites subconicus*, Sandb.
2. ——— *gracilis*, idem.
3. *Nautilus subtuberculatus*, Sandb.
4. *Gyroceras binodosum*, idem.
5. *Gyroceras costatum*, Goldf. sp.





Lith. Anst. v. J. Lehnhardt in Mainz. Wiesbaden, Verlag v. C. W. Kreidel. F. Metzger lith.





J. Lehnhardt in Mainz

Wiesbaden, Verlag v. C. W. Kreidel

4. *Phragmoceras orthogaster* Sa.

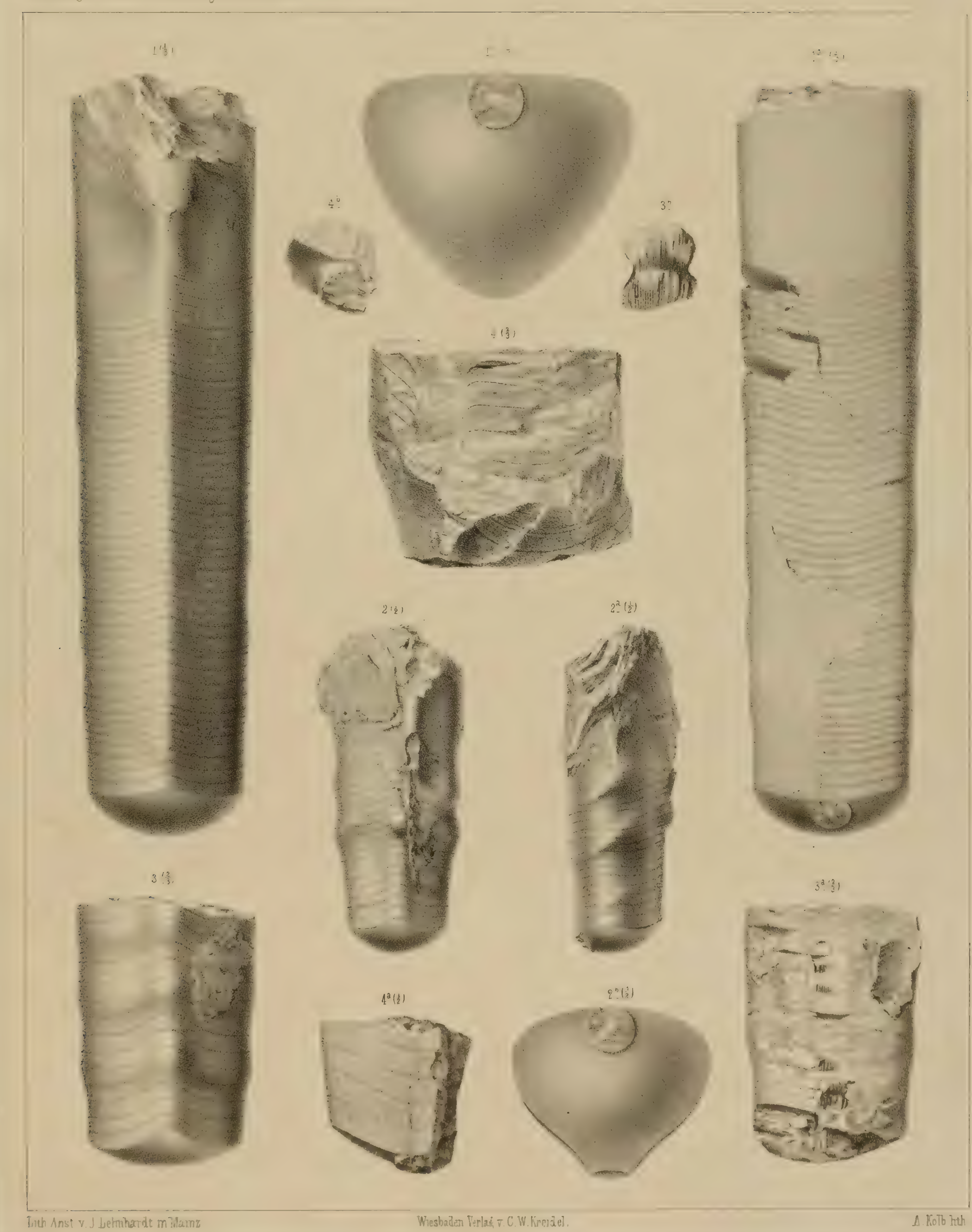




Lith. Anst. v. J. Lehnhardt in Mainz. Wiesbaden, Verlag v. C.W. Kreidel. A. Kolb lith.

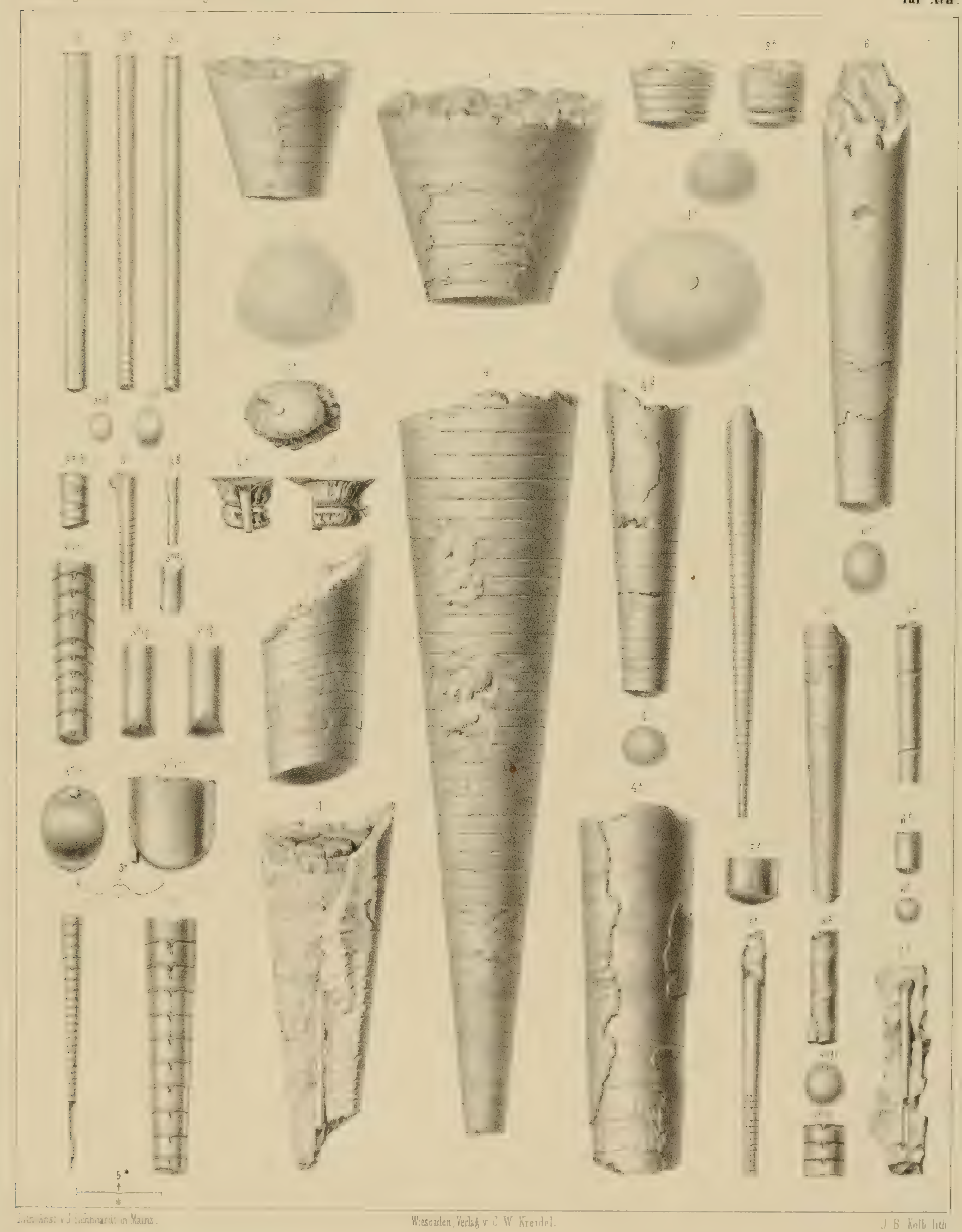
1. *Trochoceras ? serpens, Sandb.*
2. *Phragmoceras bicarinatum, id.*
3. *Cyrtoceras lamellosum, D'Arch. et De Vern.*
4. *Cyrtoceras plano-excavatum, Sandb.*
5. *——— breve, id.*
6. *Gyroceras ? quadrato-clathratum, id.*
7. *Gyroceras ? tenuisquamatum, id.*





Orthoceras triangulare, D'Arch. et De Vern.

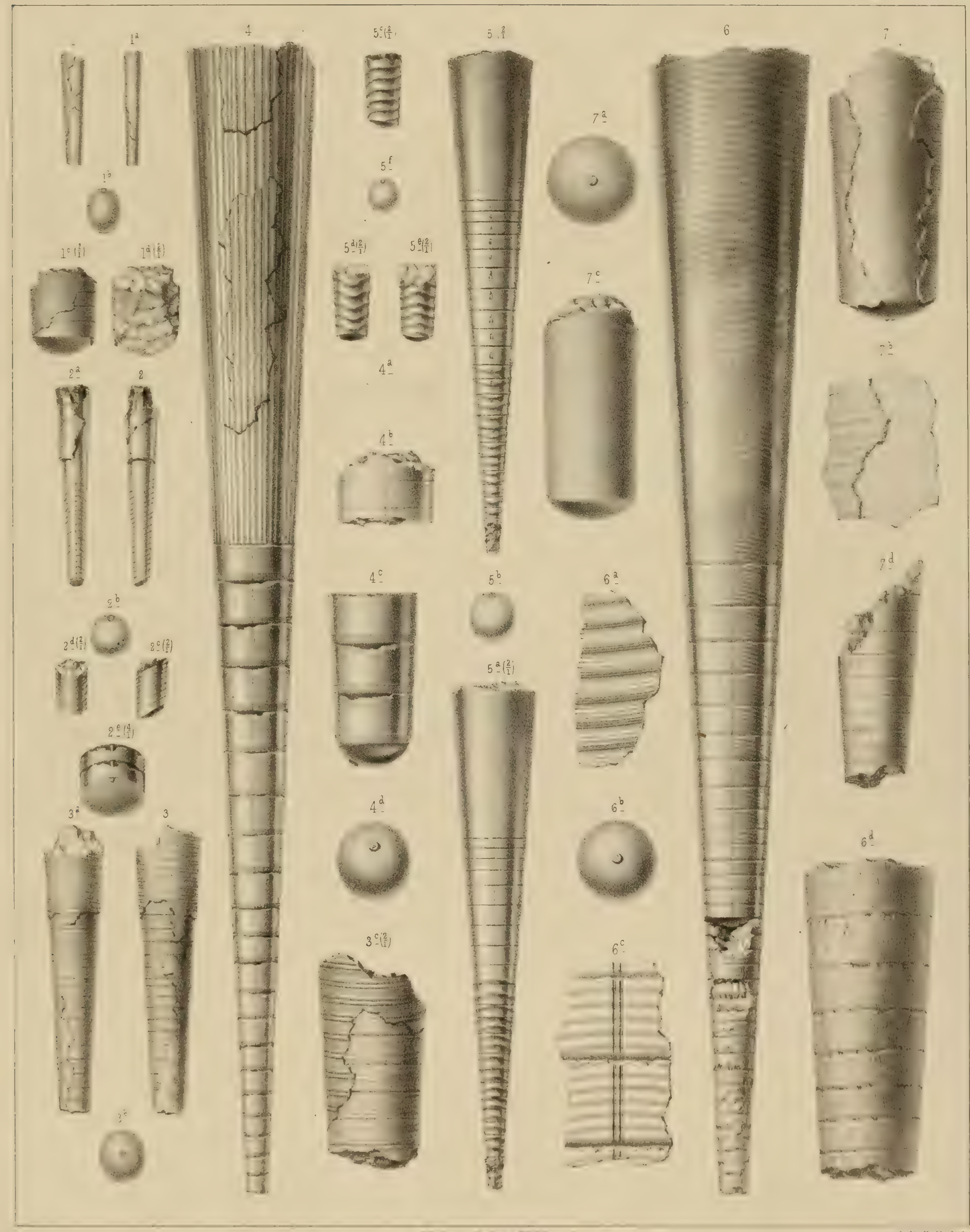




Lith. Anst. v. J. Lehnhardt in Mainz. | Wiesbaden, Verlag v. C. W. Kreidel. | J. B. Kolb lith.

1. *Cyrtoceras subconicum, Sandb.*
2. *——— applanatum, id.*
3. *Bactrites carinatus, Münst. sp.*
4. *Orthoceras planoseptatum, Sandb.*
5. *Bactrites gracilis, id.*
6. *Orthoceras subflexuosum, (Münst.) Keys.*

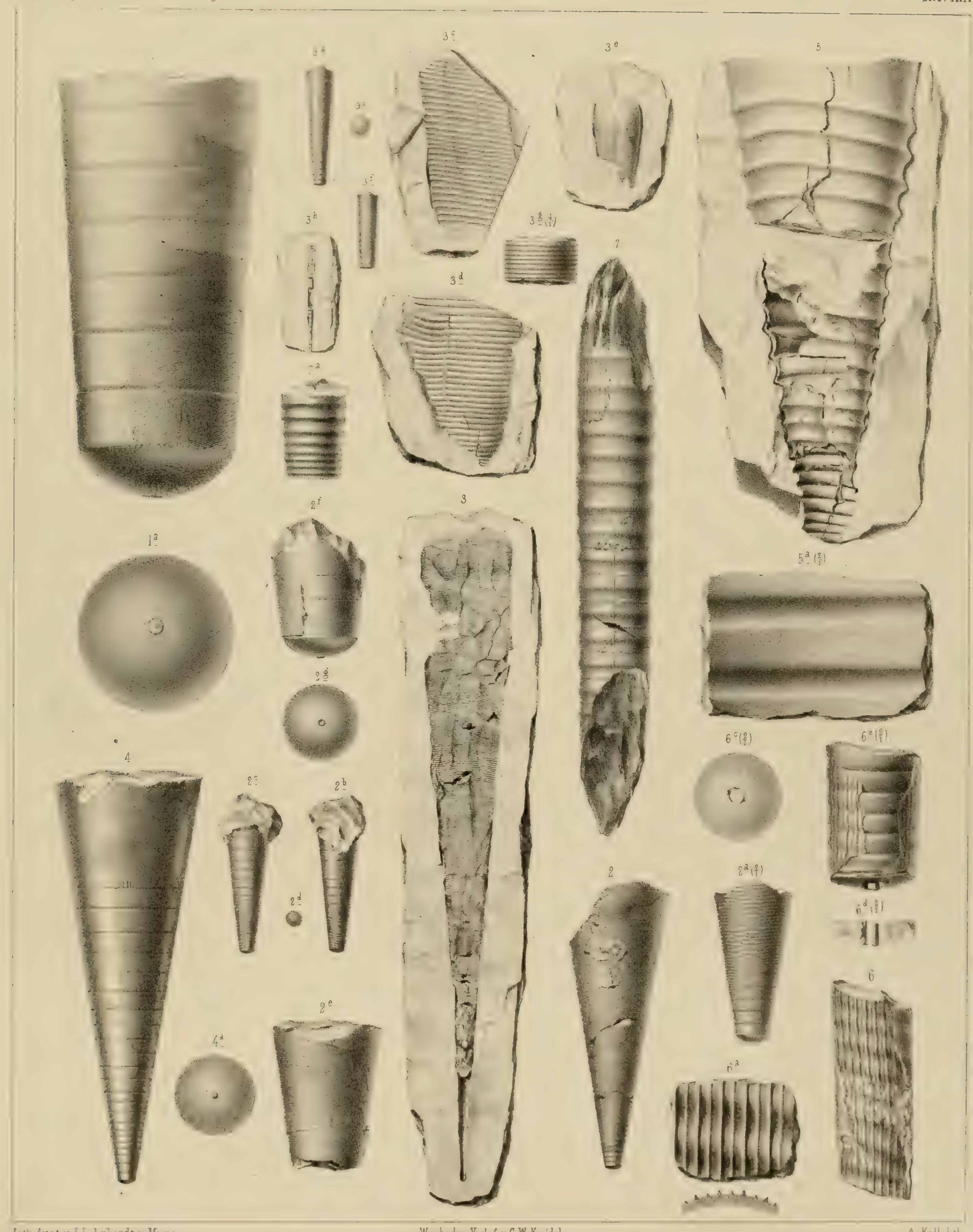




Lith. Anst. v. J. Lehnhardt in Mainz. Wiesbaden, Verlag [illegible] Kreidel. J. B. Kolb lith.

1. Orthoceras compressum, F. A. Röm.
2. ——— obliquiseptatum, Sandb.
3. ——— bicingulatum, id.
4. [illegible]
5. ——— cochleiferum, id.
6. ——— undatolineolatum, id.
7. Orthoceras lineare, Münst.

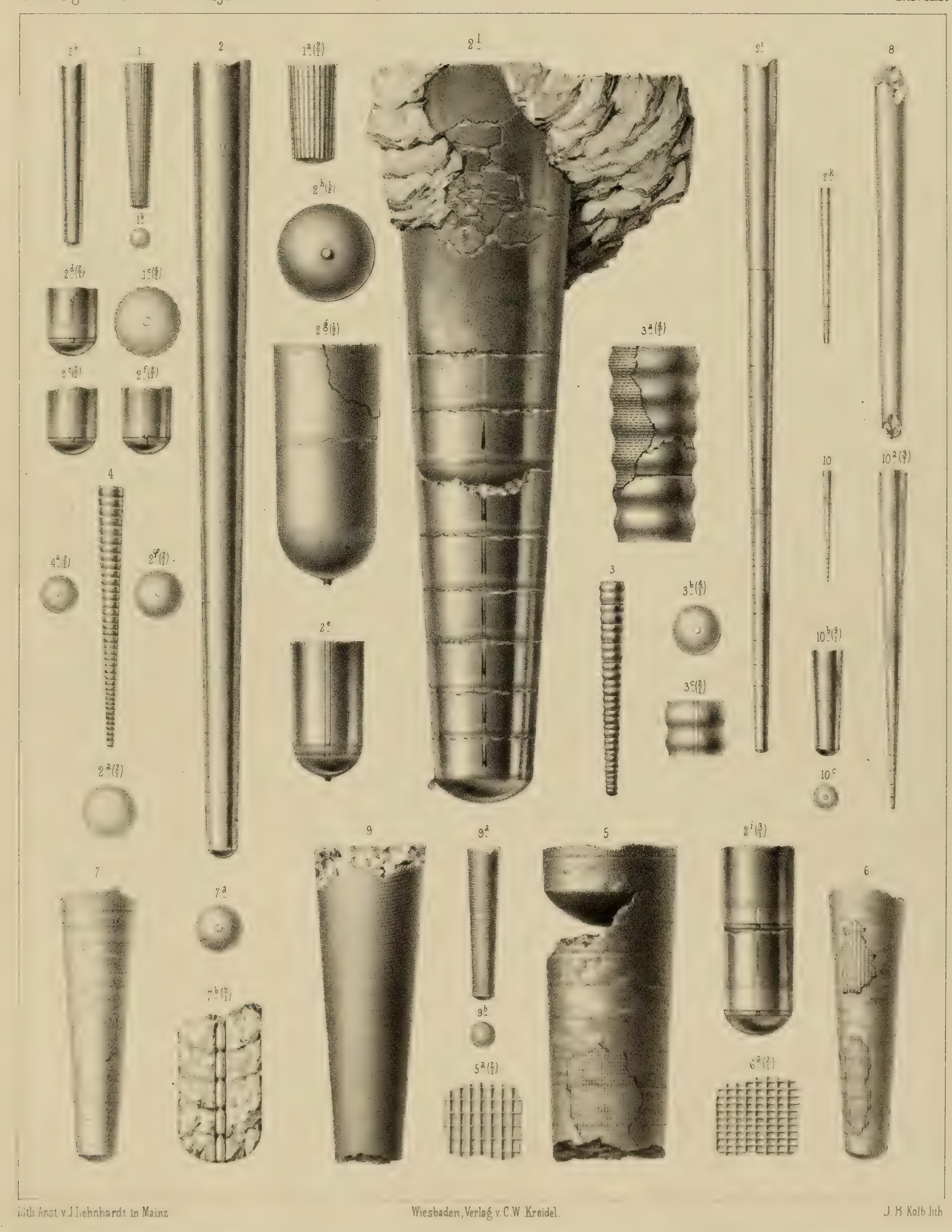




Lith. Anst. v. J. Lehnhardt in Mainz. Wiesbaden, Verlag v. C. W. Kreidel. A. Kolb lith.

1. *Orthoceras crassum*, F. A. Röm.
2. —— *arcuatellum*, Sandb.
3. —— *striolatum*, H. v. Meyer.
4. *Orthoceras rapiforme*, Sandb.
5. —— *scalare*, Goldf.
6. —— *Tubicinella*, J. Sow.
7. *Orthoceras tenuilineatum*, Sandb.

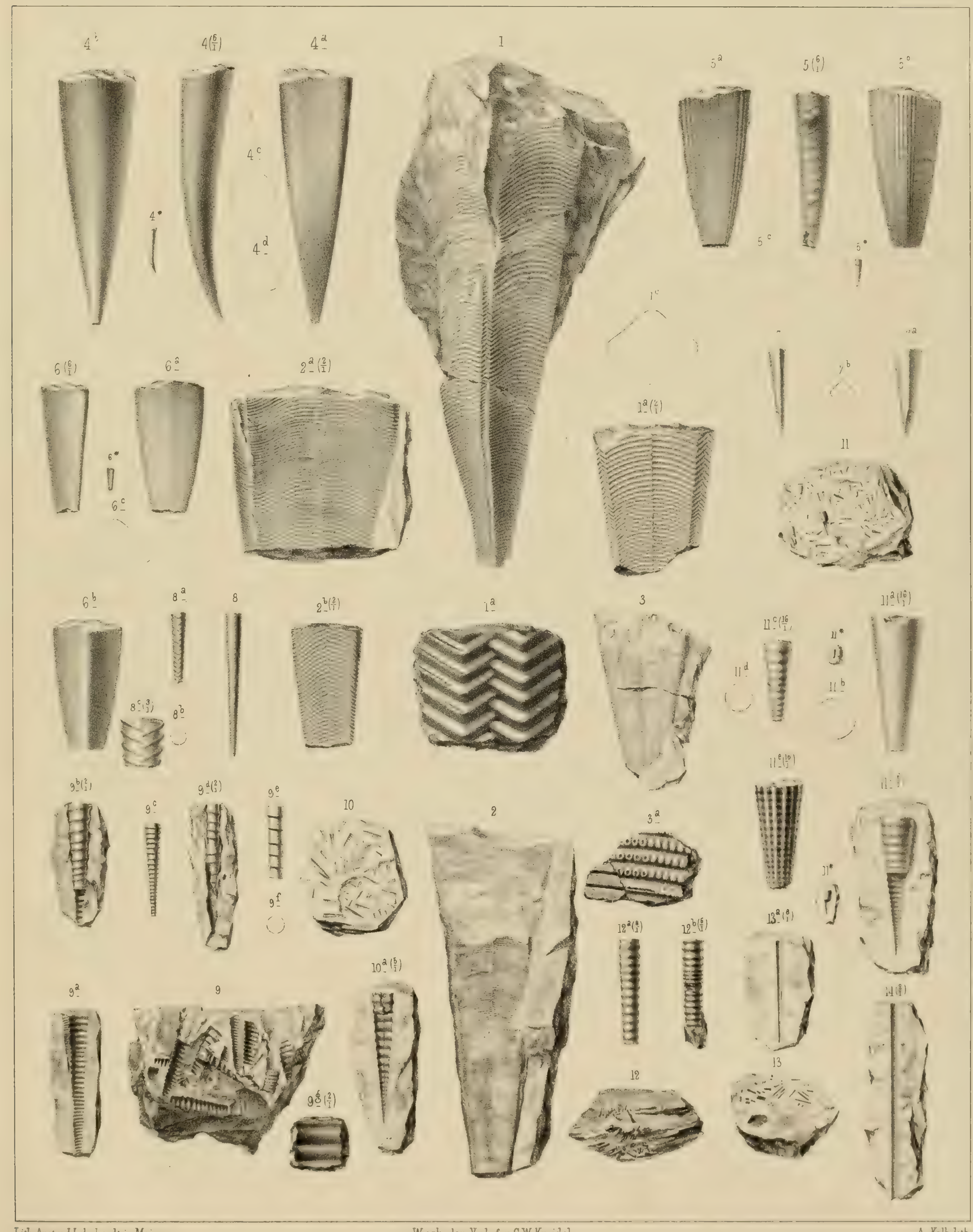




Lith Anst v. J. Lehnhardt in Mainz Wiesbaden, Verlag v. C. W. Kreidel. J. B. Kolb lith

1. *Orthoceras polygonum*, Sandb
2. ——— *regulare*, v. Schloth
3. ——— *consitum*, Sandb
4. *Orthoceras attenuatum*, J. Sow
5. ——— *quinqueclathratum*, Sandb
6. ——— *clathratum*, id
7. ——— *simplicissimum*, id
8. *Orthoceras acuarium*, Münst
9. ——— *vittatum* Sandb.
10. ——— *acutissimum*, id.

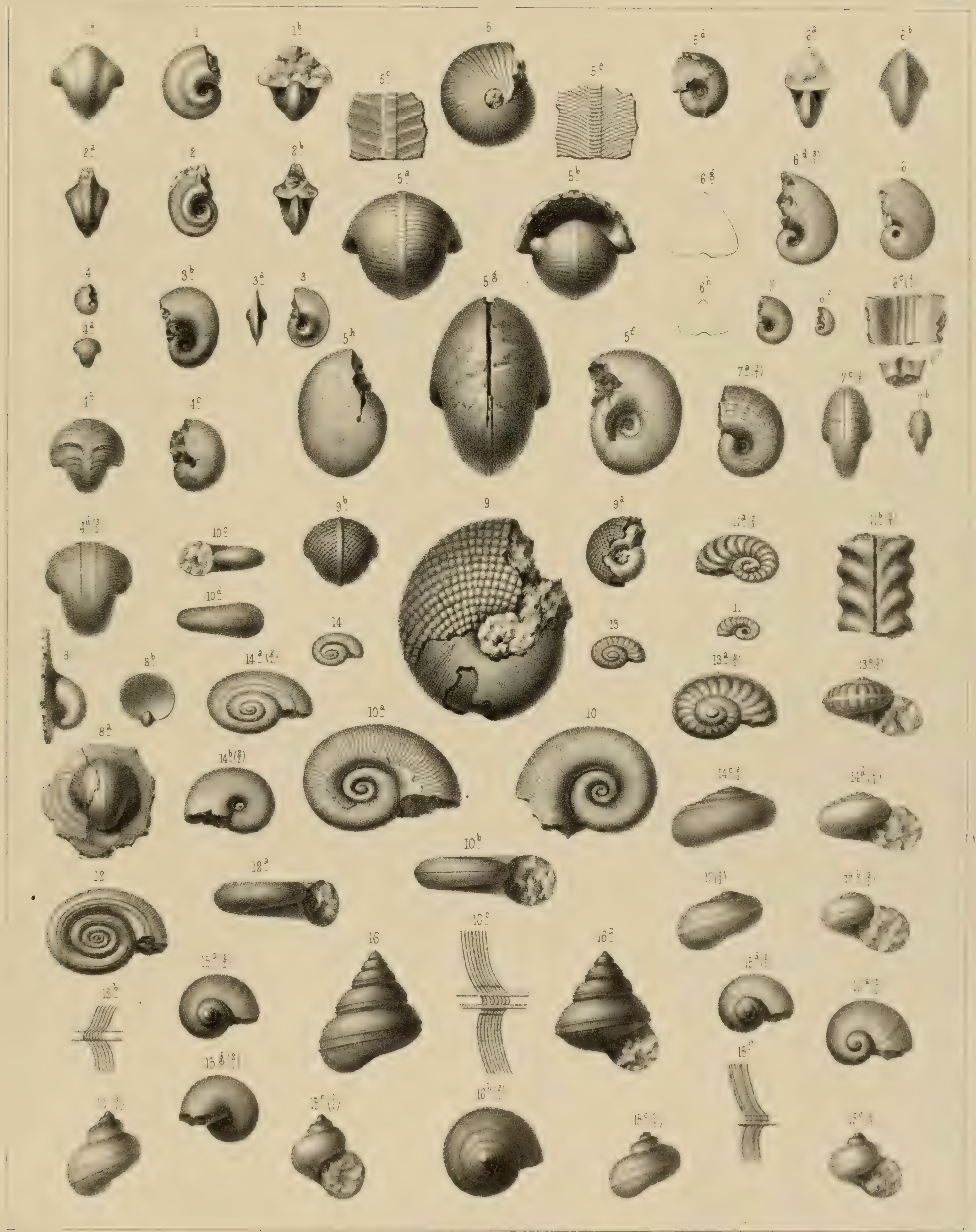




Lith Anst v J Lehnhardt in Mainz. Wiesbaden, Verlag v. C. W. Kreidel A. Kolb lith

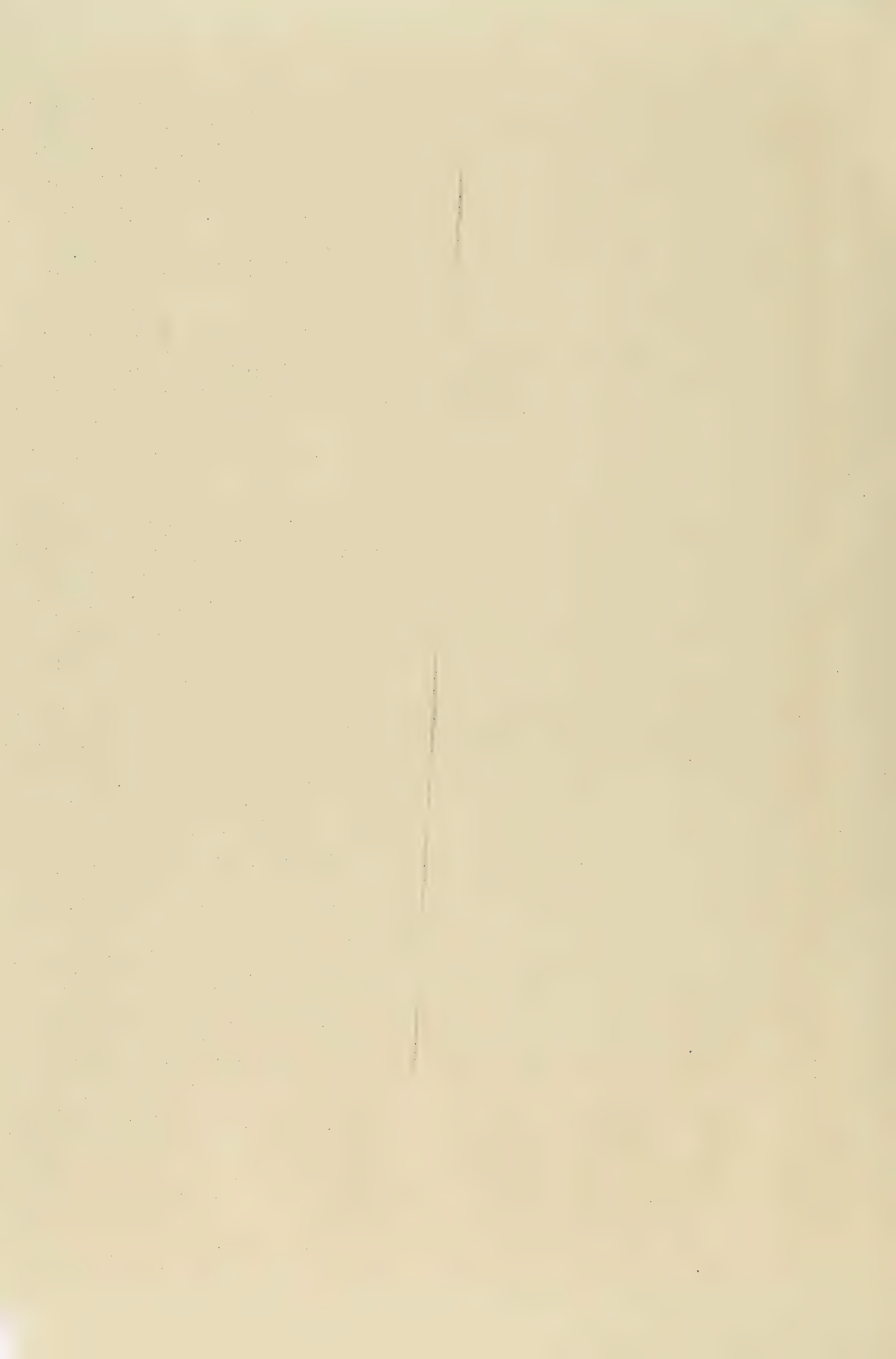
1. *Conularia deflexicosta*, Sandb.
2–3. ——— *subparallela*, id.
4. *Pugiunculus unguiformis*, id.
5. ——— *fasciculatus*, id.
6. *Pugiunculus rimulosus*, Sandb.
7. ——— sp.
8. *Coleoprion gracilis*, id.
9. *Tentaculites scalaris*, v. Schloth.
10. ——— *sulcatus*, F. A. Röm.
11. *Tentaculites multiformis*, Sandb.
12. ——— *subcochleatus*, id.
13. ——— *tenuicinctus*, F. A. Röm.
14. ——— *gracillimus*, Sandb.

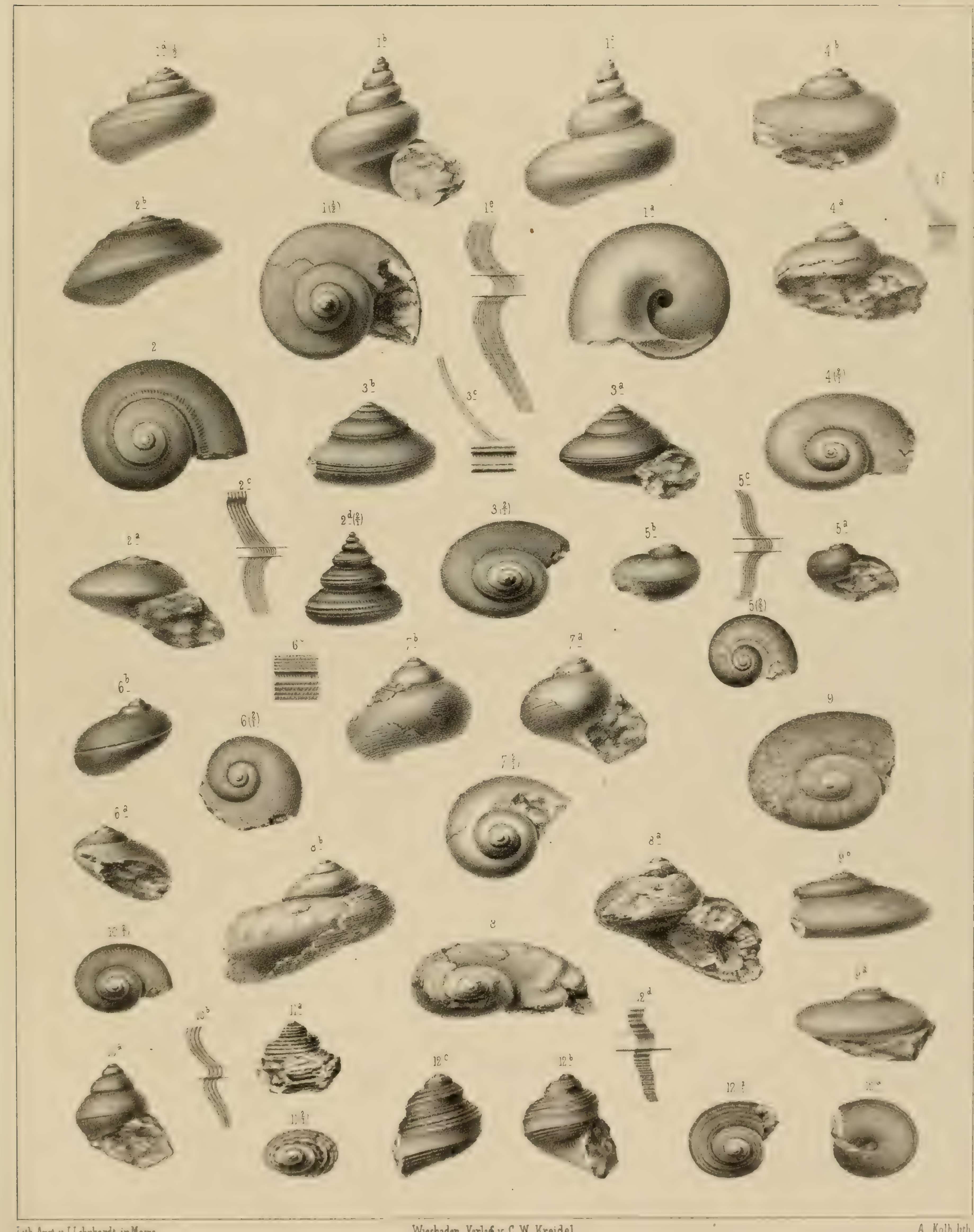




Lith. Anst. v. J. Lehnhardt in Mainz. Wiesbaden, Verlag v. C. W. Kreidel. J. B. Kolb lith.

1. *Bellerophon trilobatus, J. Sow. Var. tumidus.*
2. *—— —— Var. typus.*
3. *—— —— Var. acutus.*
4. *—— lateniasciatus, Sandb.*
5. *—— lineatus, Goldf.*
6. *—— compressus, Sandb.*
7. *Bellerophon decussatus, Fleming.*
8. *—— macrostoma, C. F. Roemer.*
9. *—— tuberculatus, D'Orbigny.*
10. *Pleurotomaria bifida, Sandb.*
11. *—— cornu arietis, id.*
12. *—— Euomphalus, id.*
13. *Pleurotomaria binodosa, F. A. Roe…*
14. *—— calculiformis, Sandb.*
15. *—— subcarinata, F. A. Roemer.*
16. *——* [illegible]
17. *—— Rotella, id.*





Lith. Anst. v. J. Lehnhardt in Mainz

Wiesbaden, Verlag v. C. W. Kreidel.

A. Kolb lith.

1. *Pleurotomaria delphinulaeformis, Sndb.*
2. ——— *crenato-striata, id.*
3. ——— *costulato-canaliculata, id.*
4. ——— *naticaeformis, id.*
5. *Pleurotomaria turbinea, Schnur.*
6. ——— *tenui-arata, Sandb.*
7. ——— *strialis, Phill.*
8. ——— *macrostoma, Sandb.*
9. *Pleurotomaria Sigaretus, Sandb.*
10. ——— *squamato-plicata, id.*
11. ——— *bicoronata, id.*
12. ——— *planannulata, id.*





Lith. Anst. v. J. Lehnhardt in Mainz — Wiesbaden, Verlag v. Kreidel & Niedner — I. B. Kolb lith.

1. *Pleurotomaria decussata, Sandb.*
2. *ead. Var. sinistrorsa, id.*
3. — *Var. elegans, id.*
4. — *Var. excicosta, id.*
5. — *Var. inaequiplicata, id.*
   — *Var. tenui canaliculata, id.*
   — *Var. dimidiata, id.*

6. *Pleurotomaria decussata, Var. parcicosta, Sb.*
7. *ead. Var. geminata, id.*
[illegible]
— [illegible] *impliatus, id.*
— *exsiliens, id.*
— [illegible]
— [illegible]

13. *Pleurotomaria quadrilineata, Sandb.*
— *trilineata, id.*
— *bilineata, Goldf. sp.*
— *Verinea, Sandb.*
— *ingulata, Phill.*
— *Catantostoma clathratum, Sandb.*
— *Platyschisma applanatum, id.*



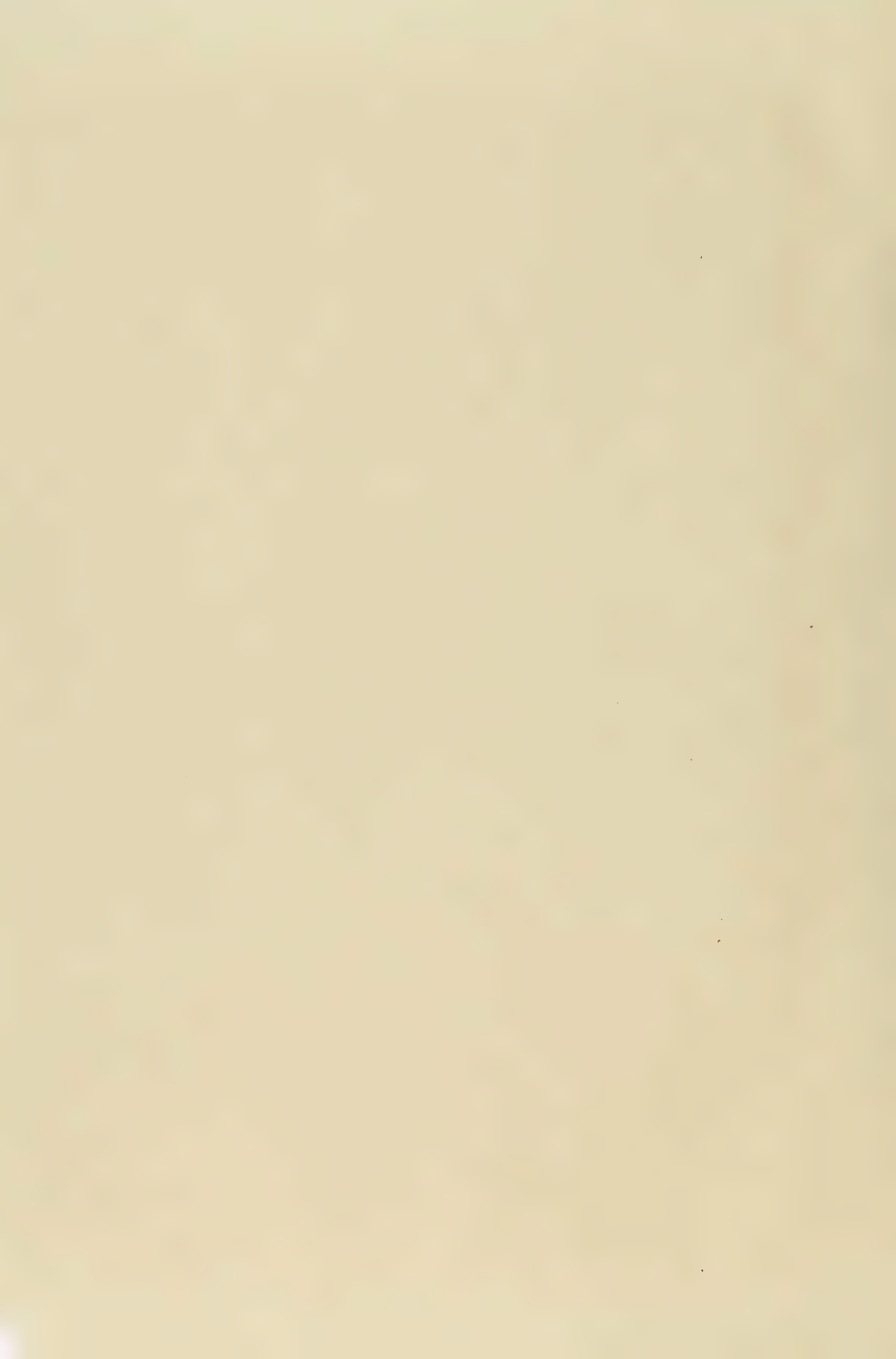


Wiesbaden, Verlag v. Kreidel & Niedner — J. B. K. ..

C—us spinosus, Goldf.
2 Euomphalus aculicosta, Sandb.
— decussatus, id.
— annulosus, Phill.
— Rota, Sandb.
— laevis, D'Arch. et De Vern.
idem. Var. turritus, Sandb.

8 Euomphalus? retrorsus, F. A.
9 — Serpula de Kon.
Delphinula subarmata, Sa…
Trochus multispira, id.
Turbo squamifer, D'Arch. et De Ve…
— niquilineatus, Sa…

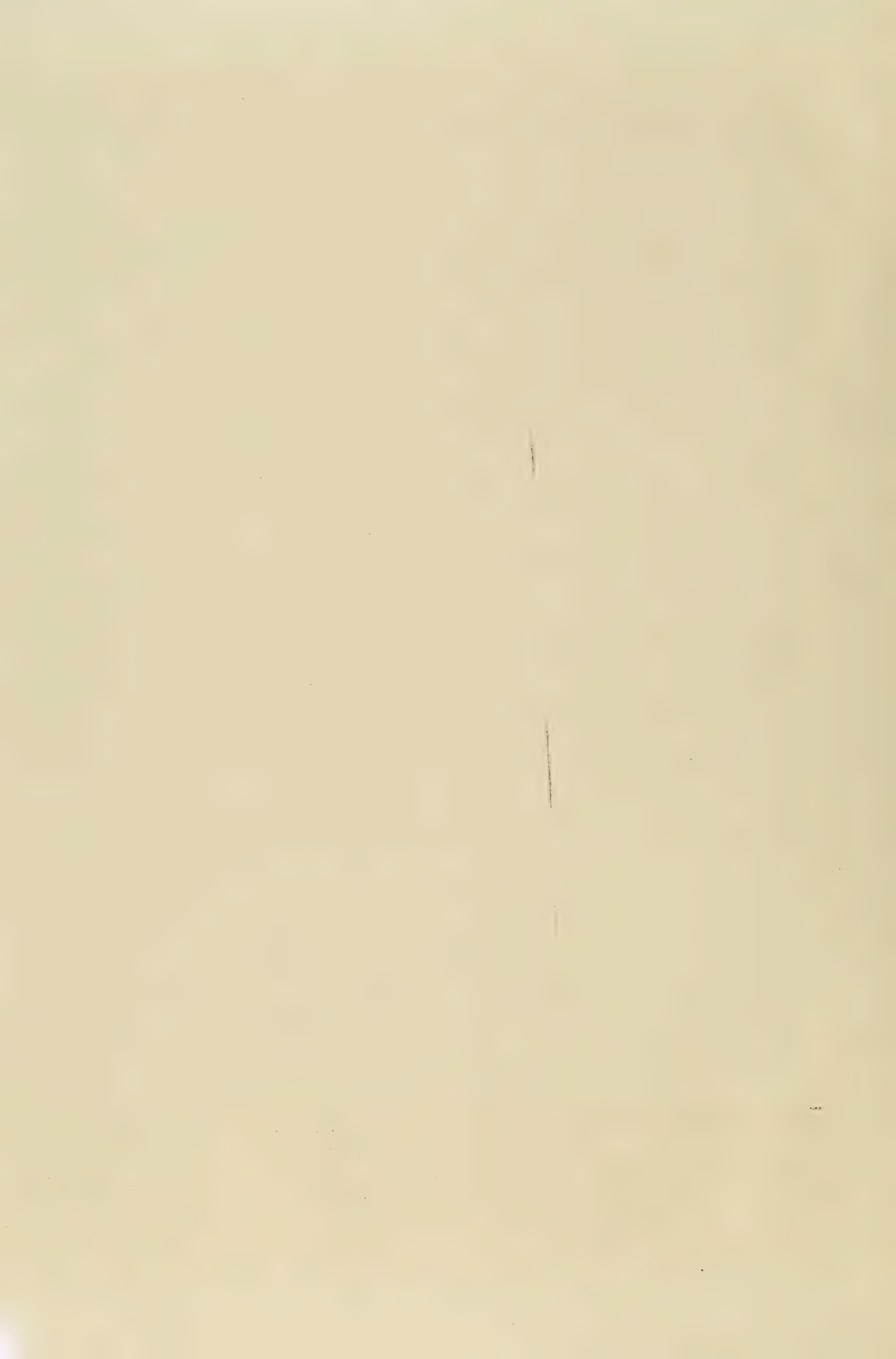
idem Var. suboro…





Lith. Anst. v. J. Lehnhardt in Mainz. Wiesbaden, Verlag v. Kreidel & Niedner J. B. Kolb lith.

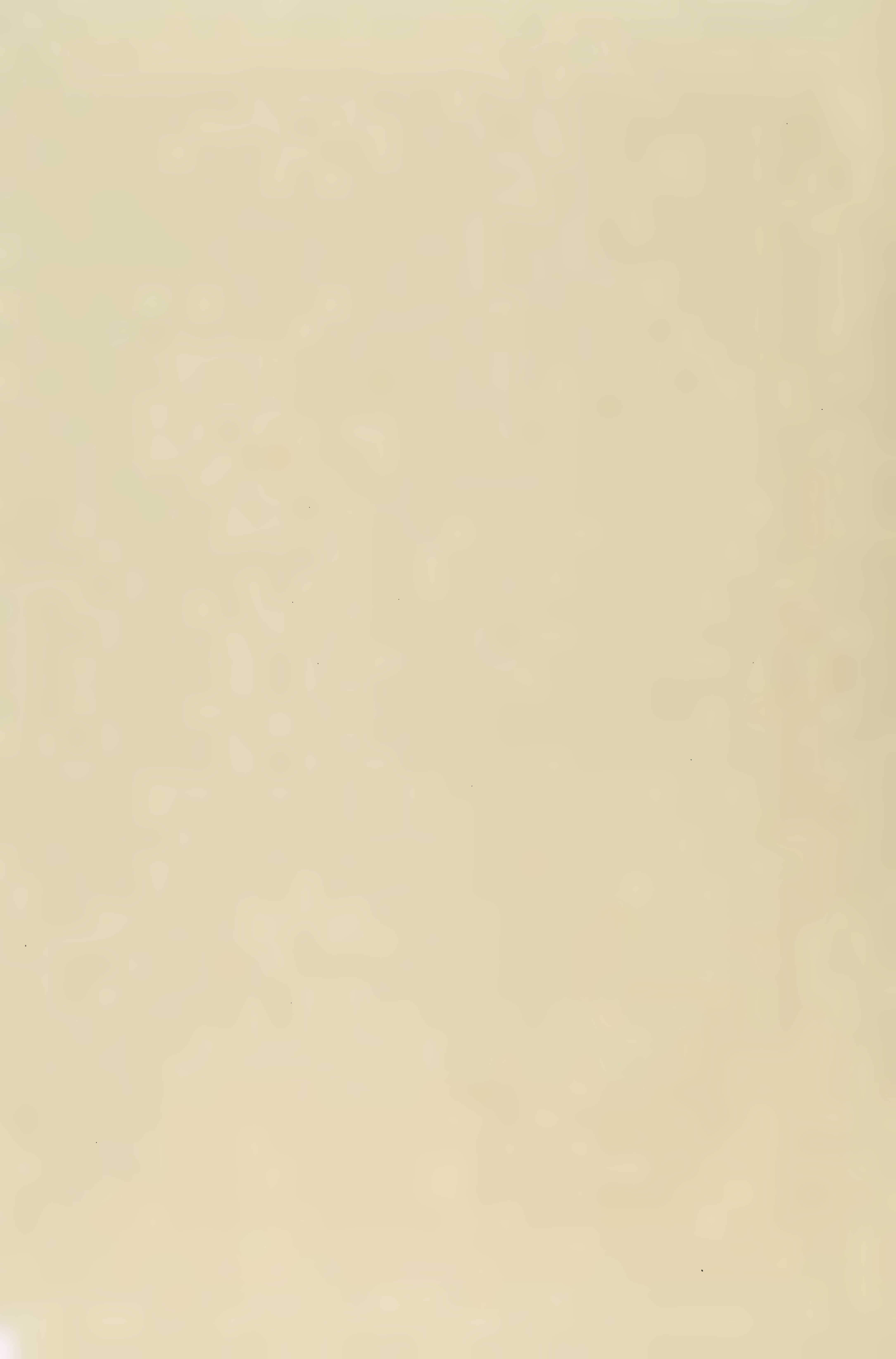
1. *Scoliostoma crassilabrum*, Sandb.
2. ——— *megalostoma*, id.
3. ——— *conoideum*, id.
4. ——— *expansilabrum*, id.
5. ——— *gracile*, id.
6. *Natica piligera*, id.
7. *Holopella tenuicostata*, id.
8. ——— *tenuisulcata*, id.
9. *Holopella piligera*, Sandb.
10. ——— *subulata*, F. A. Roemer sp.
11. *Loxonema costatum*, Goldf. sp.
12. ——— *obliquiarcuatum*, Sandb.
13. ——— *reticulatum*, Phill.
14. *Macrochilus subclathratum*, Sandb.
15. ——— *ventricosum*, Goldf. sp.
16. *Macrochilus ovatum*, F. A. Roemer sp.
17. *Capulus gracilis*, Sandb.
18. ——— *psittacinus*, id.
19. *Dentalium subcanaliculatum*, id.
20. ——— *annulatum*, id.
21. ——— *taeniolatum*, id.
22. *Chiton corrugatus*, id.
23. ——— *sagittalis*, id.

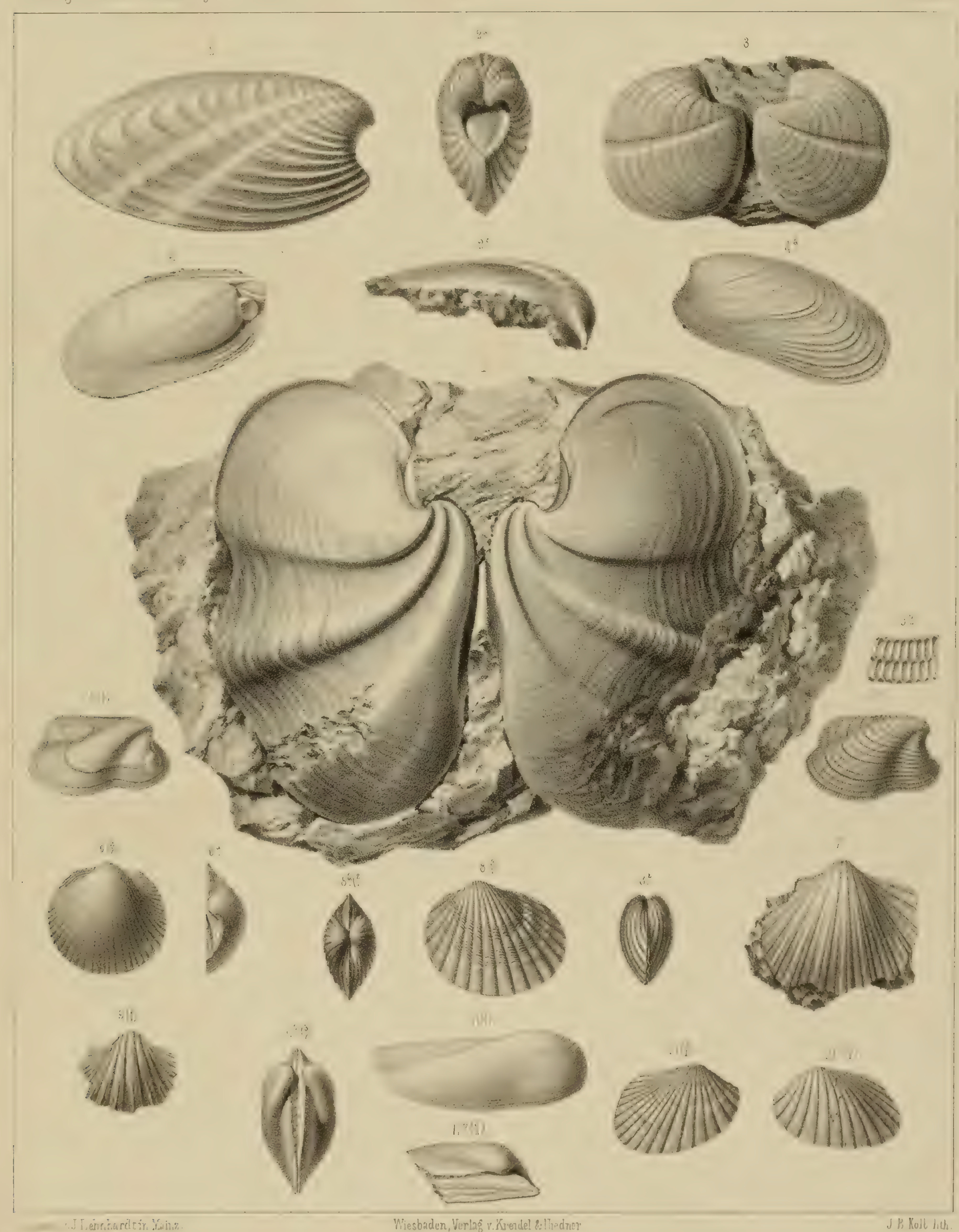




Lith. Anst. v. J. Lehnhardt in Mainz. Wiesbaden, Verlag von Kreidel & Niedner.

1. *Solen costatus, Sandb.*
2. *Corbula inflata, id.*
3. *Sanguinolaria unioniformis, id.*
4. *Cardiomorpha alata, id.*
5. *Lucina rectangularis, Sandb.*
6. *Cardium aliforme, Sow.*
7. *— — brevialatum, Sandb.*
8. *— — procumbens, id.*
9. *Isocardia suborbicularis, Sandb.*
10. *— — securiformis, id.*
11. *— — caelata, id.*
12. *Cypricardia ? acuta, id.*
13. *Cypricardia lamellosa, Phill.*
14. *Cypricardia elongata, D'Arch. et De Vern. sp.*





J. Lehnhardt in Mainz. Wiesbaden, Verlag v. Kreidel & Niedner J. B. Kolb lith.

Grammysia pes anseris, Zeil. et Wirtgen.
——— ovata, Sandb.
ead. var. abbreviata, id.
4. *Pleurophorus lamellosus, id.*

Cypricardia crenistria, Sandb.
Lunulicardium ventricosum, id.
Cardiola duplicata, Münst.

Cardiola [illegible] *striata v. Buch sp. typus*
ead. var. acuticosta Sandb.
ead. var. tenuicosta id.
Arca [illegible] *Sandb.*

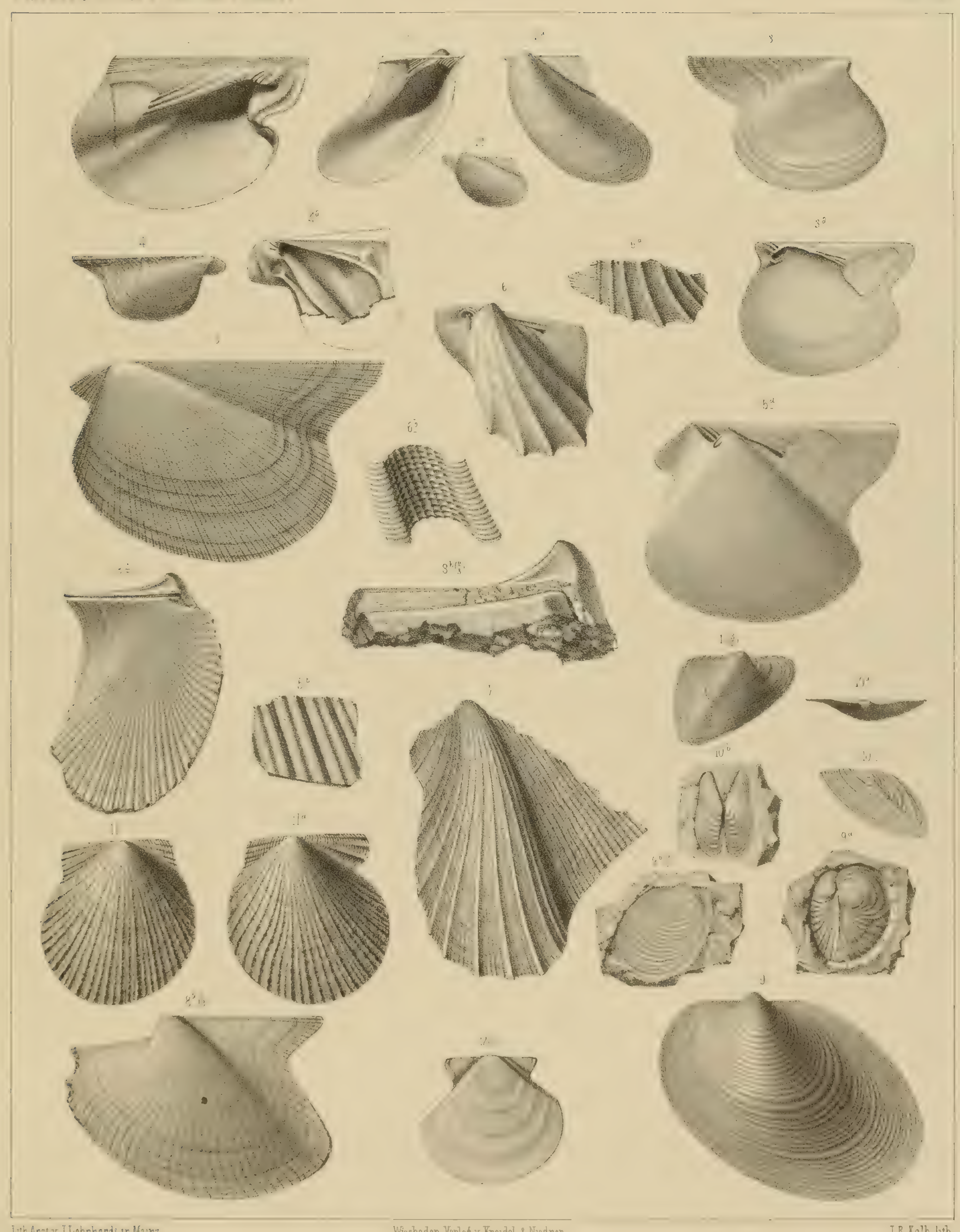




Lith. Anst. v. J. Lehnhardt in Mainz. Wiesbaden, Verlag v. Kreidel & Niedner. J. B. Kolb lith.

1. *Cardiola concentrica, v. Buch. sp.*
2. *Nucula unioniformis, Sandb.*
3. ——— *cultrata, id.*
4. ——— *tenuiarata, id.*
5. ——— *securiformis, Goldf.*
6. ——— *tumida, Sandb.*
7. *Nucula brevicultrata, Sandb.*
8. *Leda tumida, id.*
9. *Nucula cornuta, id.*
10. *Myalina tenuistriata, id.*
11. ——— *fimbriata, id.*
12. ——— *crassa, id.*
13. *Hoplomytilus crassus, Sandb.*
14. *Avicula dispar, id.*
15. ——— *lepida, Goldf.*
16. ——— *crenato-lamellosa, Sandb.*
17. *Actinodesma malleiforme, id.*
18. *Pterinea clathrata, id.*





Lith Anst v. J. Lehnhardt in Mainz. Wiesbaden, Verlag v. Kreidel & Niedner. J. B. Kolb lith

1. *Pterinea laevis, Goldf.*
2. *——— ventricosa, id.*
3. *——— plana, id.*
4. [illegible]
5. *Pterinea lineata, Goldf.*
6. *——— costata, id.*
7. *——— fasciculata, id.*
8. *——— bifida, Sandb.*
9. *Posidonomya acuticosta, Sandb.*
10. *Avicula obrotundata, id.*

[illegible] *Pecten subspinulosus, id.*

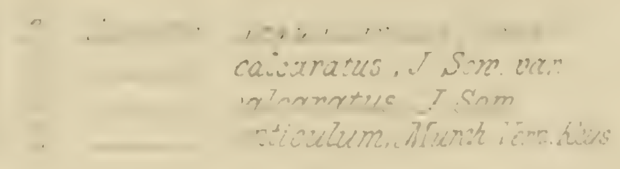
12. *——— densistria, id.*



nst v. J. Lehnhardt in Mainz
Wiesbaden, Verlag v. Kreidel & Niedner
J. B. Kolb lith.

undeterm

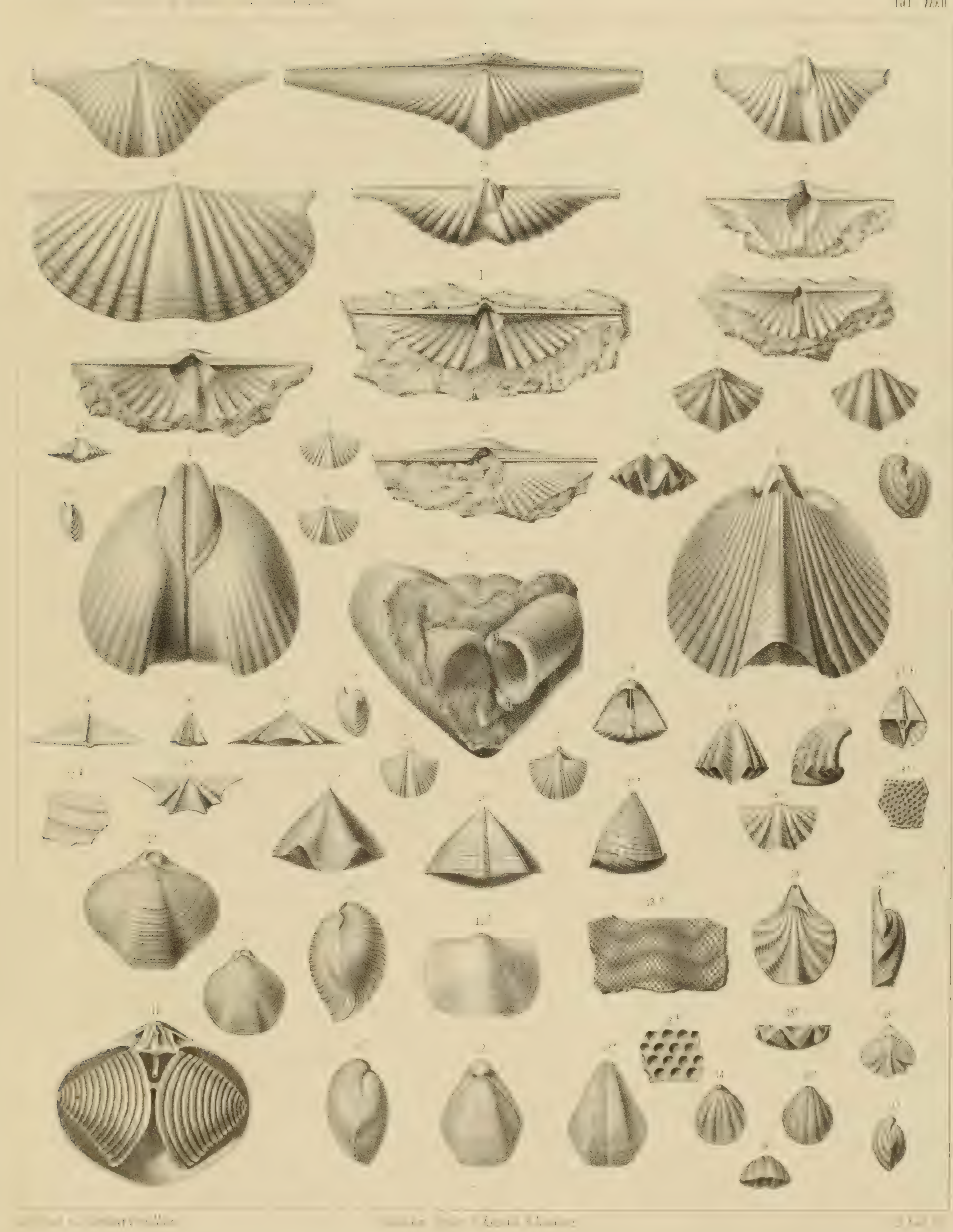
8. ______ undifer



calcaratus. J. Sow. var.

Münch.





Spirifer …

var. mucronatus, Sandb.

var. micropterus, Goldf.

ugatus, F. Roemer

imbricato-lamellosus, Sandb.

muralis, Murch. Vern. Keys.

nitidus, F. A. Roemer

Spirifer heteroclytus, Defr. sp.

—— quadriplicatus, Sandb.

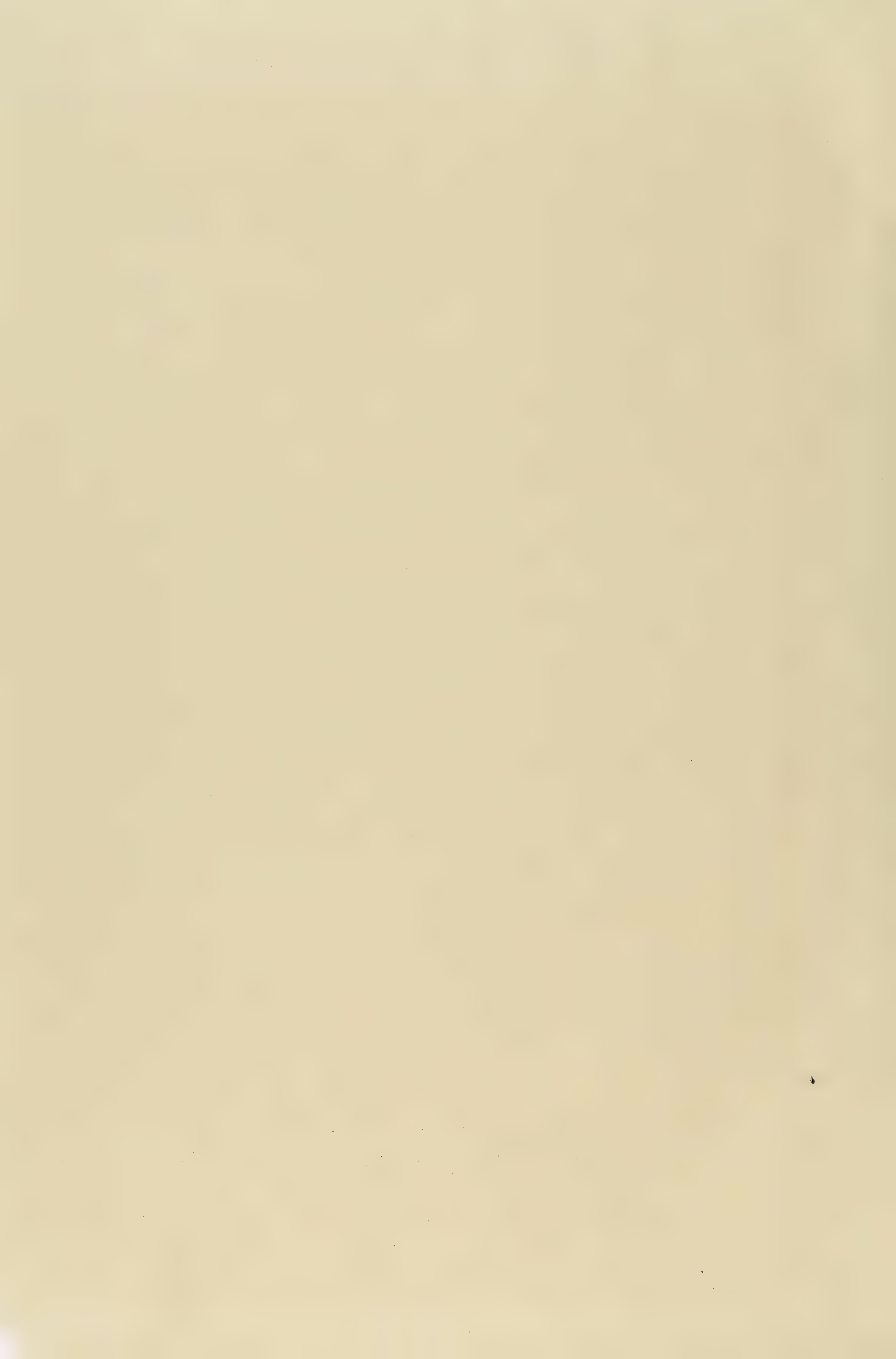
—— simplex, Phill.

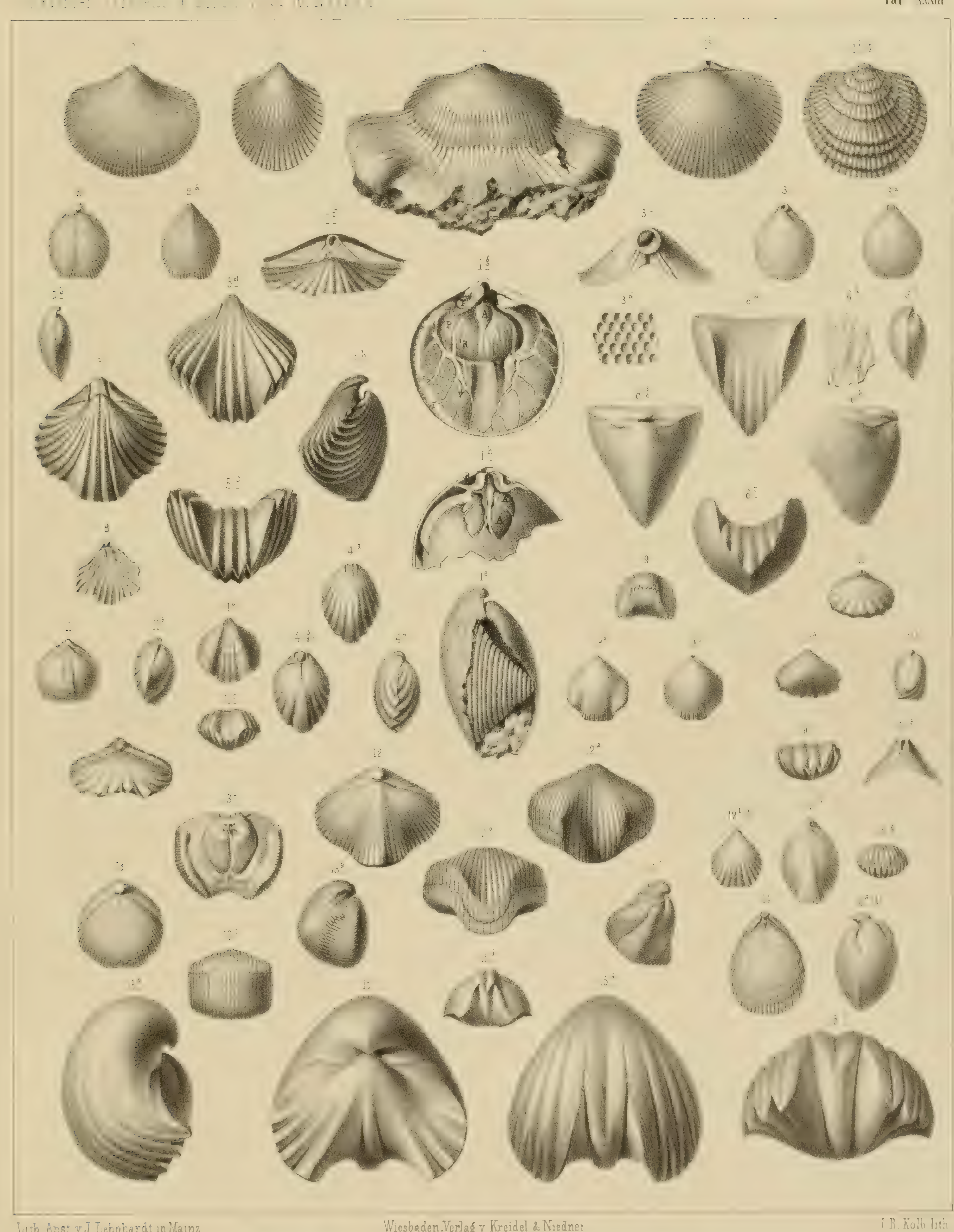
Spirigera concentrica, v. Buch sp.

—— gracilis, Sandb.

—— ferita, v. Buch sp.

14. ? Spirigerina lepida Goldf.



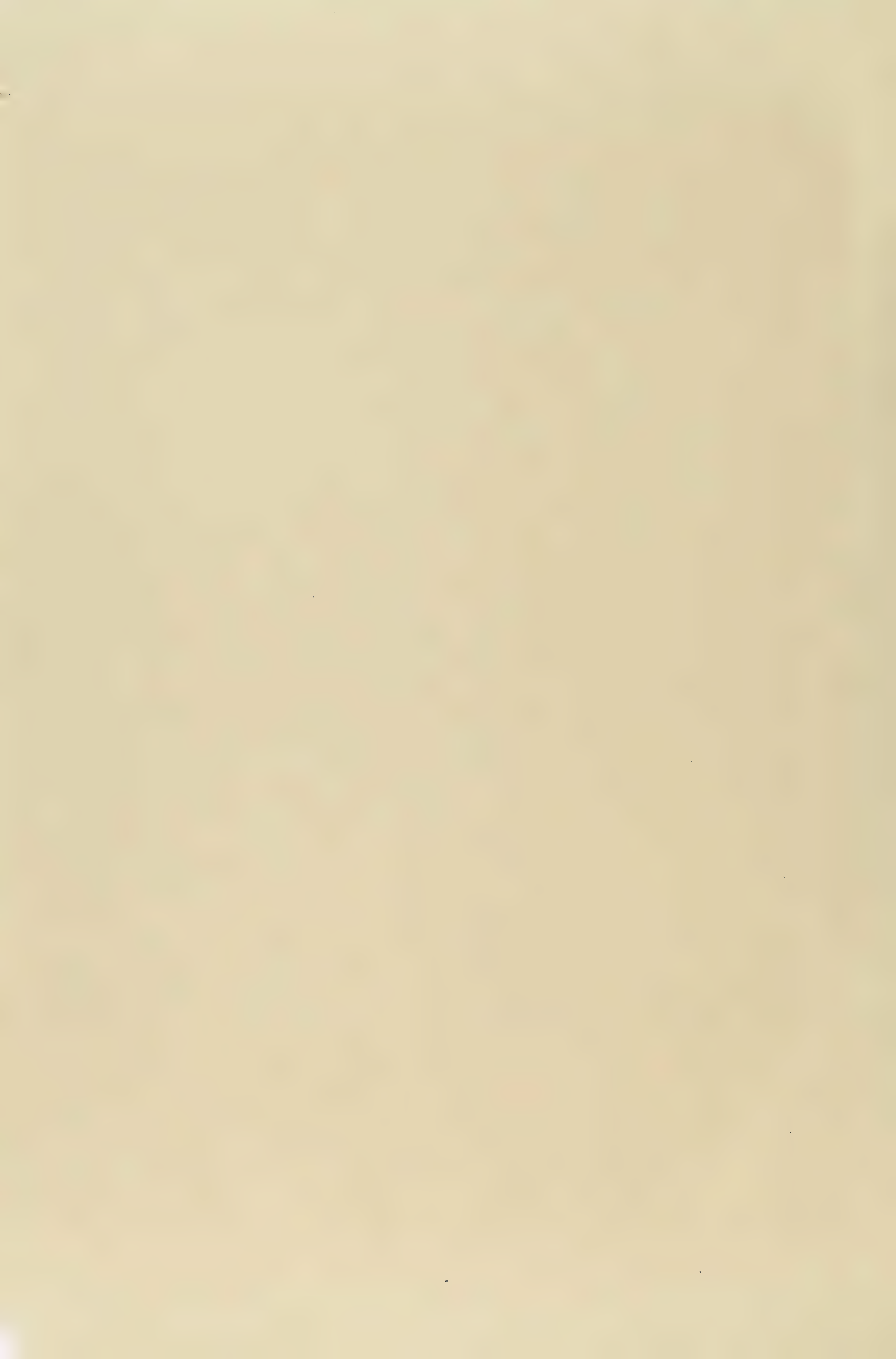


Lith. Anst. v. J. Lehnhardt in Mainz | Wiesbaden, Verlag v. Kreidel & Niedner | J. B. Kolb lith.

Spirigerina reticularis, Gmelin sp.
——— *ovalis*, Sandb.
Terebratula elongata, Schloth.
——— ? *novemplicata*, Sandb.
Rhynchonella inaurita, id.

6. *Rhynchonella pugnus*, Sow. sp.
7. ——— *acuminata*, Martin sp.
8. ——— *papyracea*, F. A. Roemer sp.
——— *tenuistriata*, Sandb.
——— *acuminata*, Martin sp.

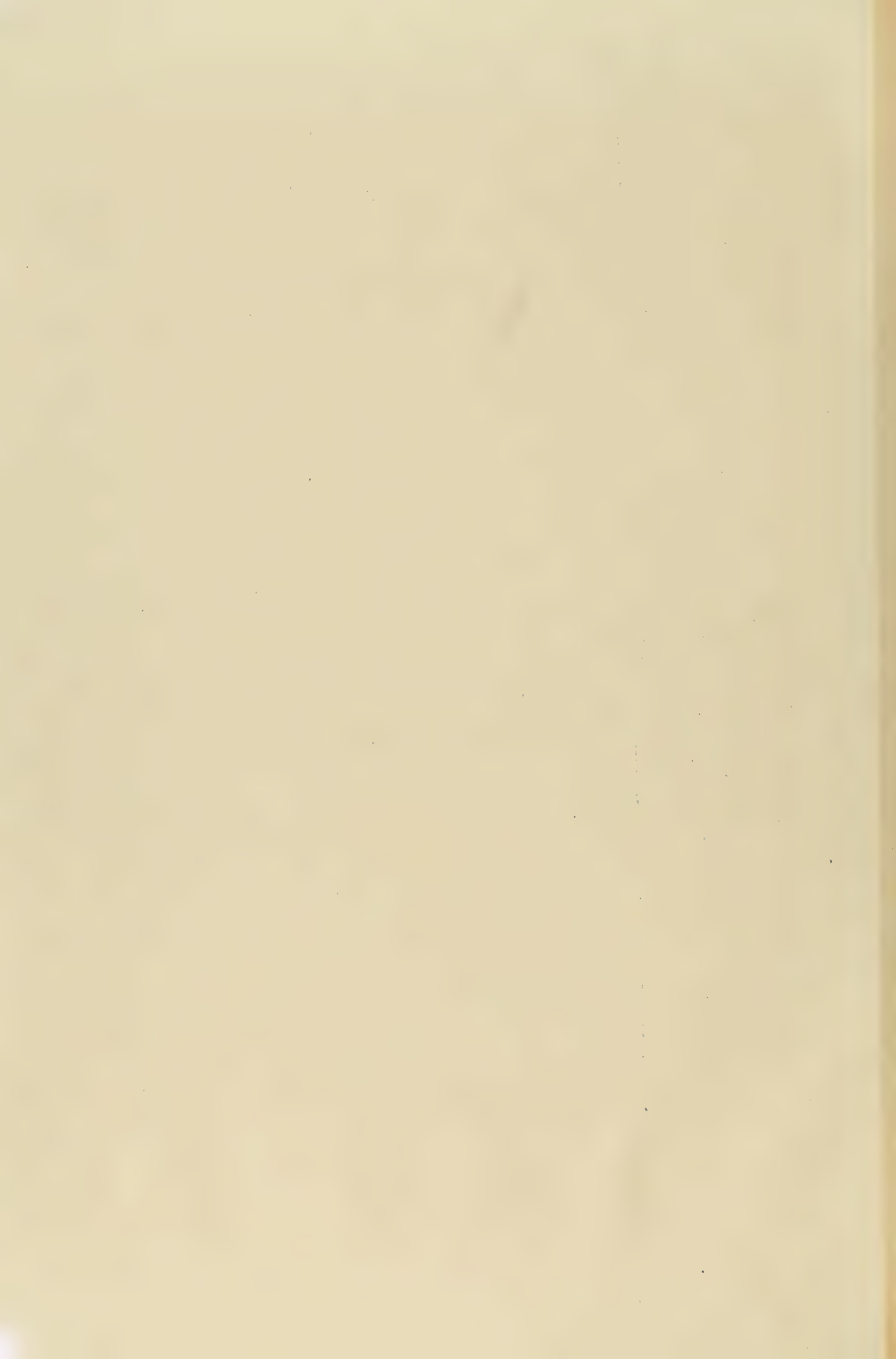
Rhynchonella subreniformis, Schnur sp.
——— *parallelepipeda*, Bronn sp.
——— *pila*, Schnur sp.
——— [illegible] F. Roemer sp.
Pentamerus acutolobatus, Sandb.

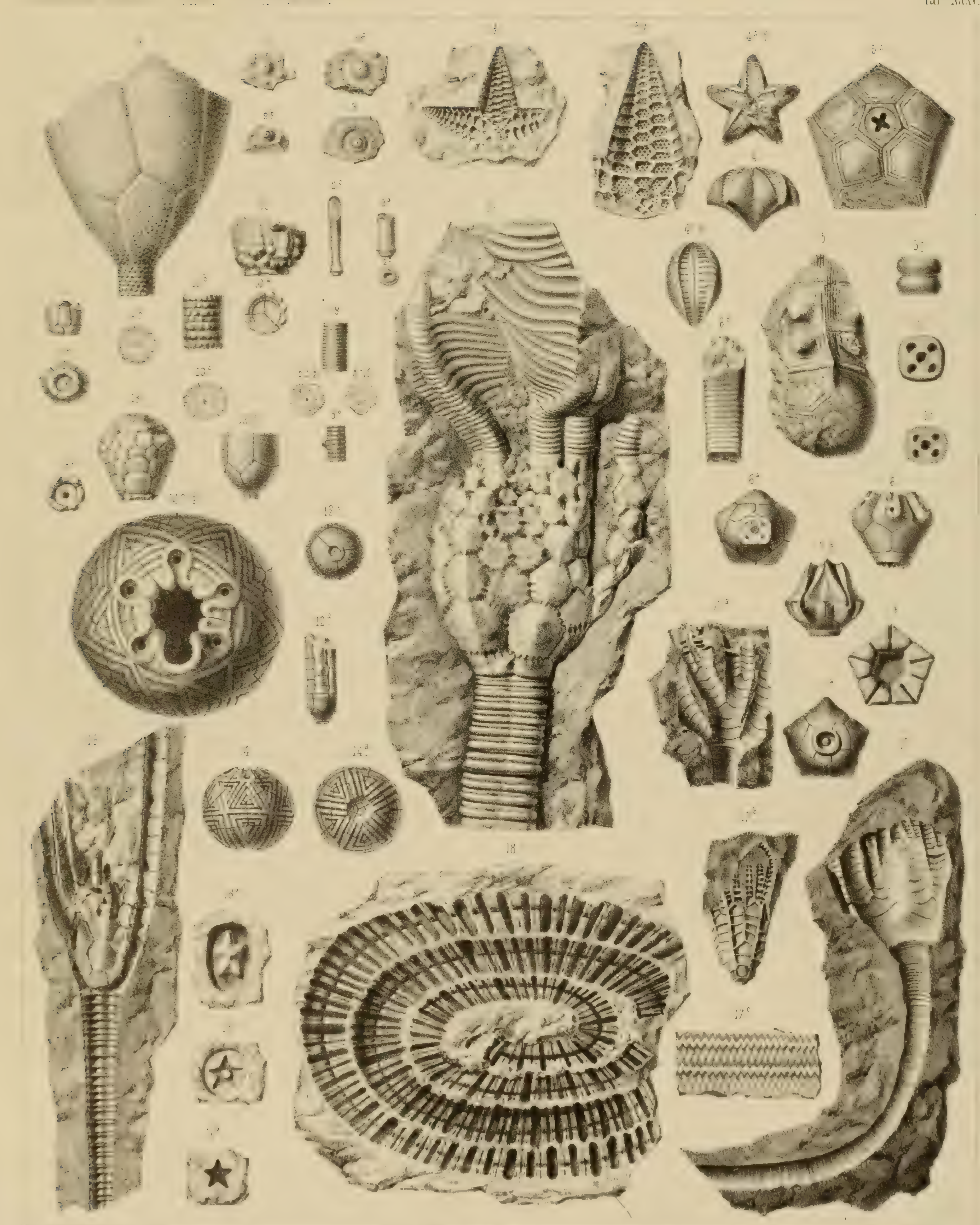




Lith. Anst. v. J. Lehnhardt in Mainz. Wiesbaden, Verlag von Kreidel & Niedner.

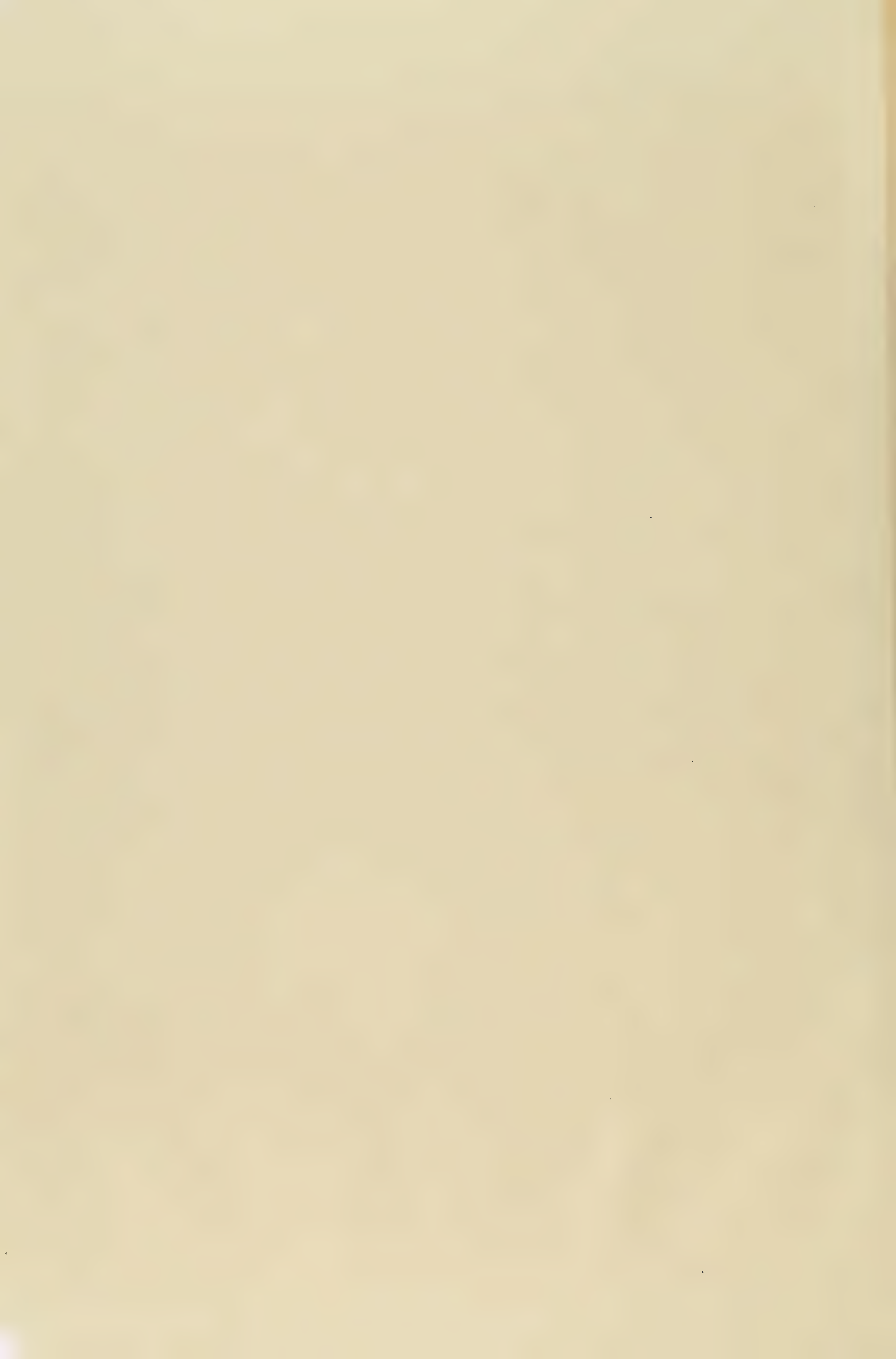
1. *Pentamerus globus*, Bronn sp.
2. *Orthis opercularis*, Murch. Vern. Keys.
3. ead. var. *sacculus*, Sandb.
4. —— *striatula*, Schloth. sp.
5. *Indeterm.*
6. *Orthisina crenistria*, Phill. sp.
7. *Strophomena ziczac*, Sandb.
8. *Strophomena laticosta*, Con. sp.
9. —— *depressa*, Dalm. sp.
10. —— *piligera*, Sandb.
11. —— *taeniolata*, id.
12. —— *subarachnoidea*, D'Arch. et de Vern. sp.
13. *Chonetes minuta*, Goldf. sp.
14. [illegible]
15. —— [illegible]
16. *Productus* [illegible]
18. —— *lamellosus*, Sandb.
19. *Lingula* [illegible], id.
20. —— [illegible], id.

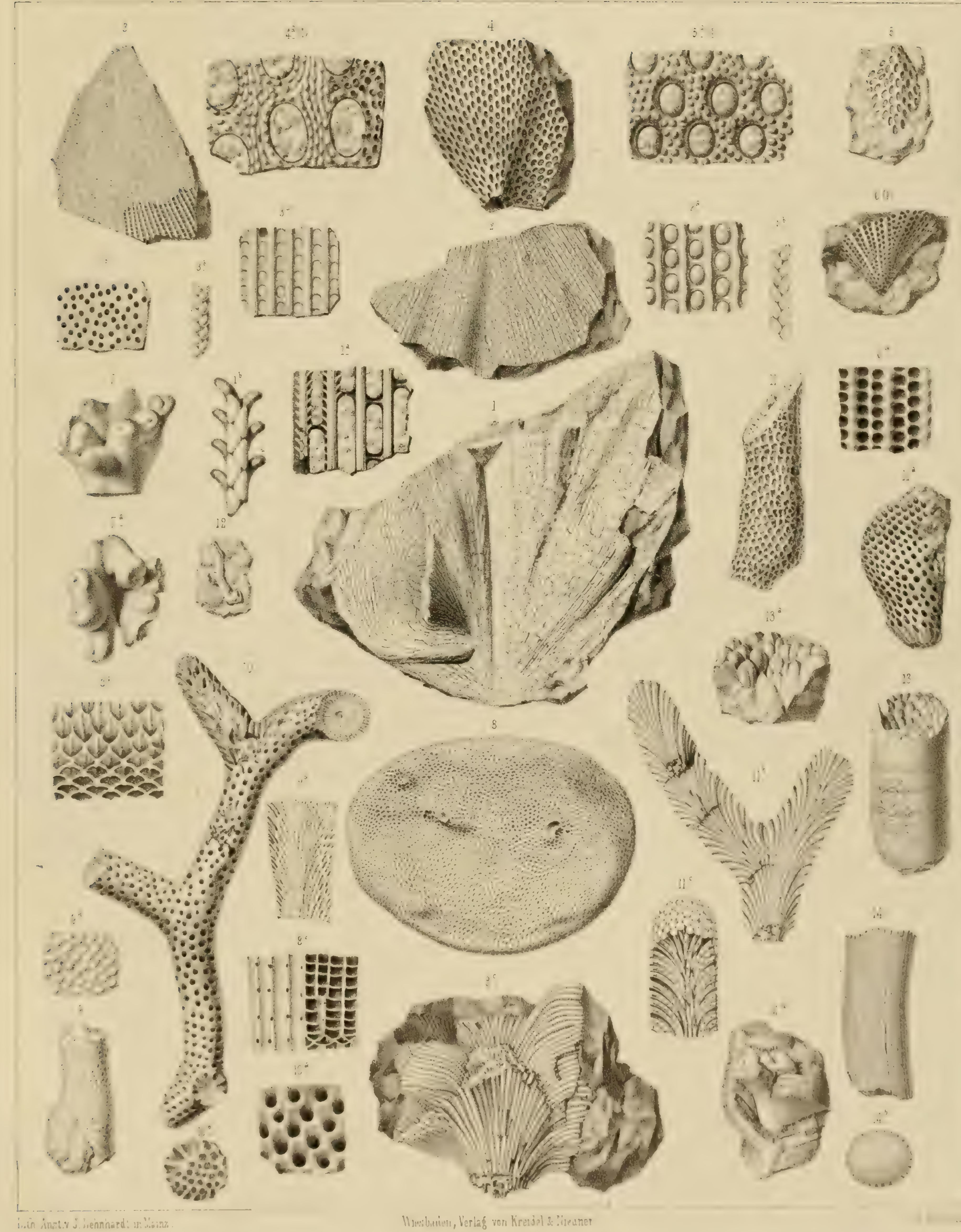




[illegible] Verlag von Kreidel & Niedner. J. B. Kolb lith.

Coelaster latiscutatus, Sandb.	7. Haplocrinus stellaris, F. Roemer.	13. [illegible]crinus globosus, Goldf.
[illegible] id.	8. ? Pentacrinus priscus, Goldf.	[illegible]
[illegible]	[illegible] sp.	15. Ctenocrinus [illegible], Goldf. sp.
[illegible]	[illegible] Sandb.	16. ? Heterocrinus pachydactylus, Sandb.
[illegible]crinus nodosus, id.	[illegible] Goldf. sp.	17. Cyathocrinus rhenanus, F. Roemer.
[illegible]	Stylocrinus scaber, Goldf. sp.	18. Crinoid column, indeterm.



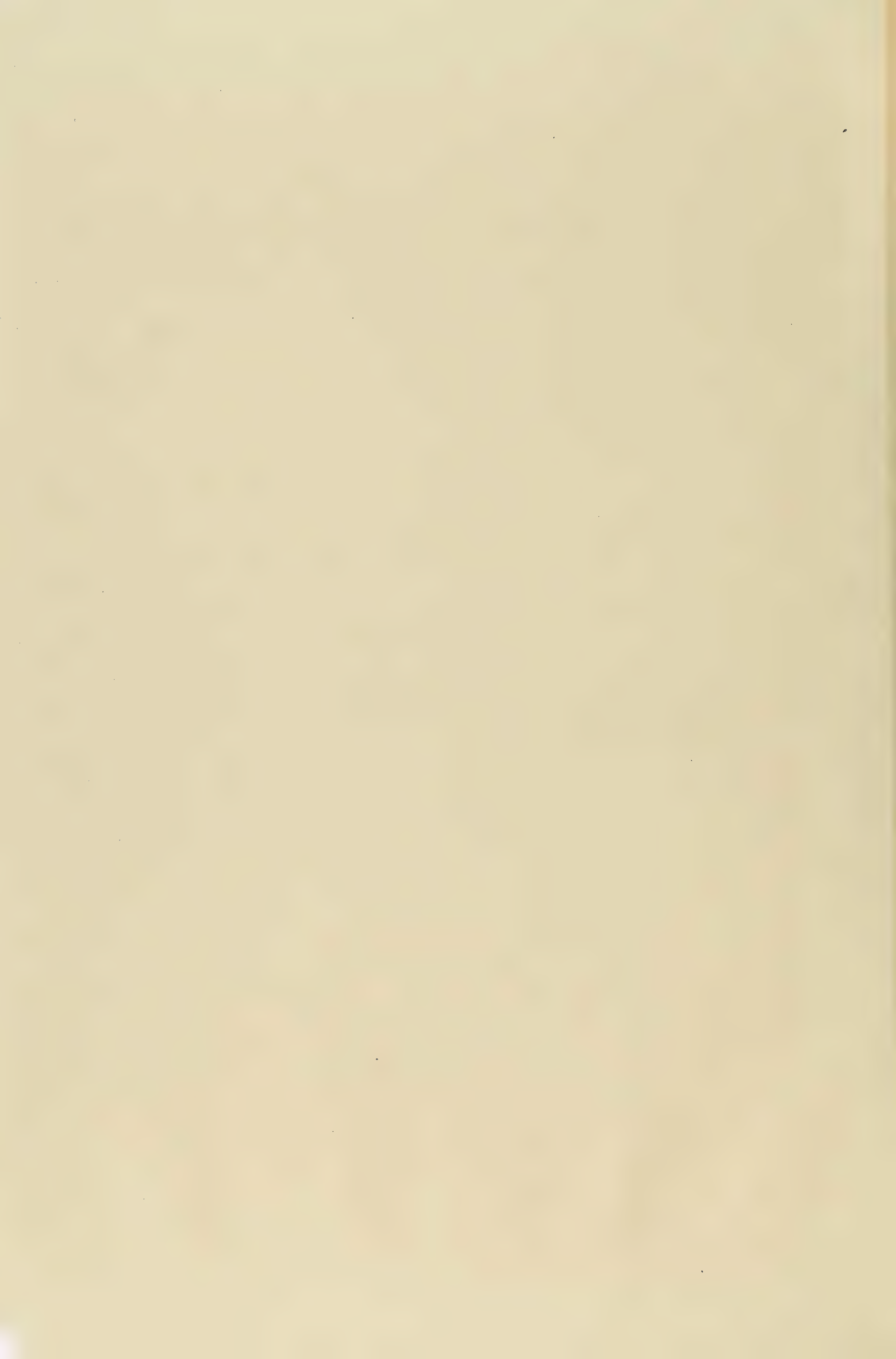


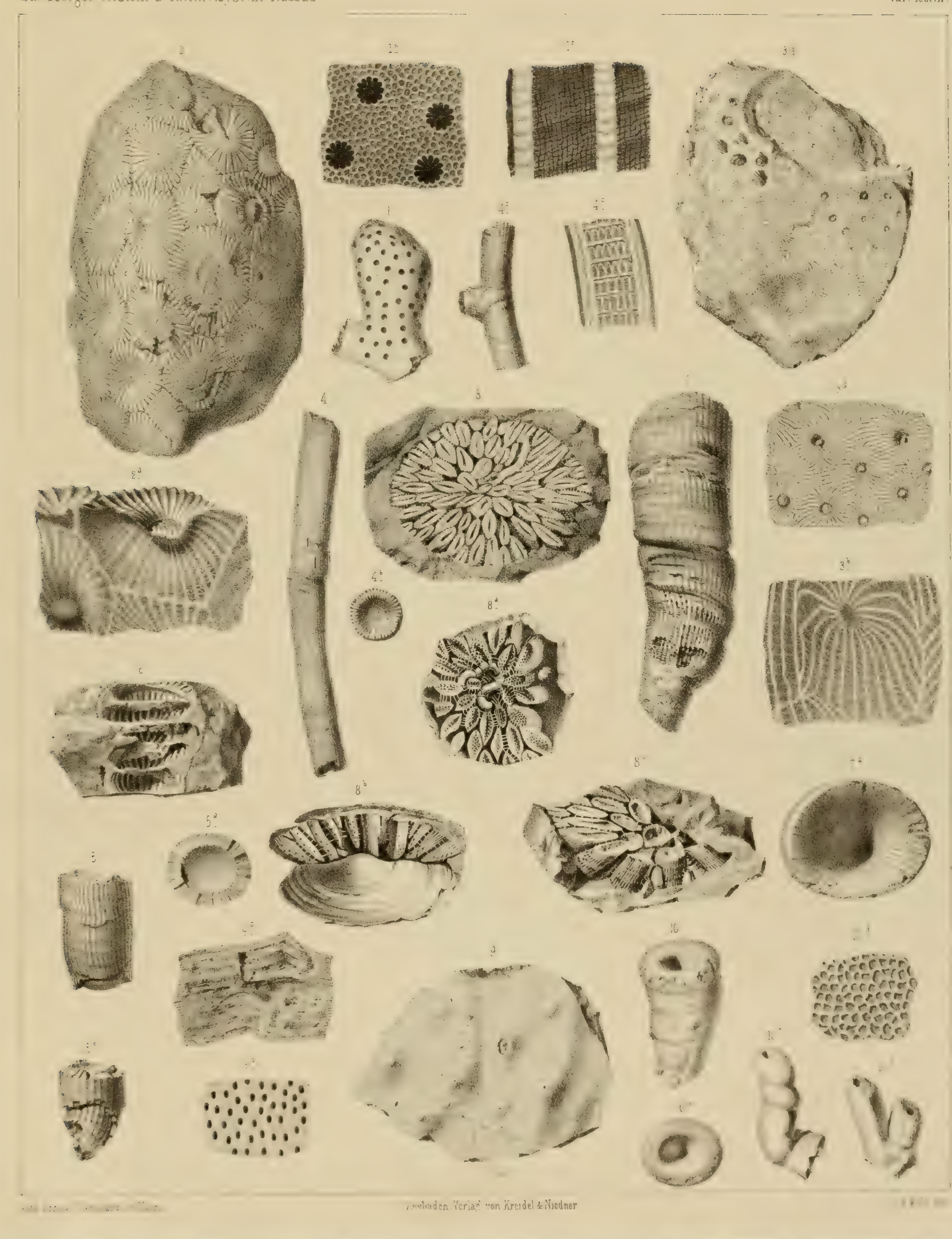
Lith. Anst. v. J. Lehnhardt in Mainz. Wiesbaden, Verlag von Kreidel & Niedner

Westreila aculeata, Sandb.
rectangularis, Sandb.
3 ead. var.
4 Polypora striatella, Sandb.
laxa, Sandb.

6 Hemitrypa oculata, Phill.
7 Ceriopora dentiformis Sandb.
8 Alveolites suborbicularis, Lam.
9 Fenestella reticulata, Blainv. sp.

10. [illegible]
11. [illegible] cerou[illegible]
12. [illegible]
14. [illegible]





[illegible] Wiesbaden. Verlag von Kreidel & Niedner [illegible]

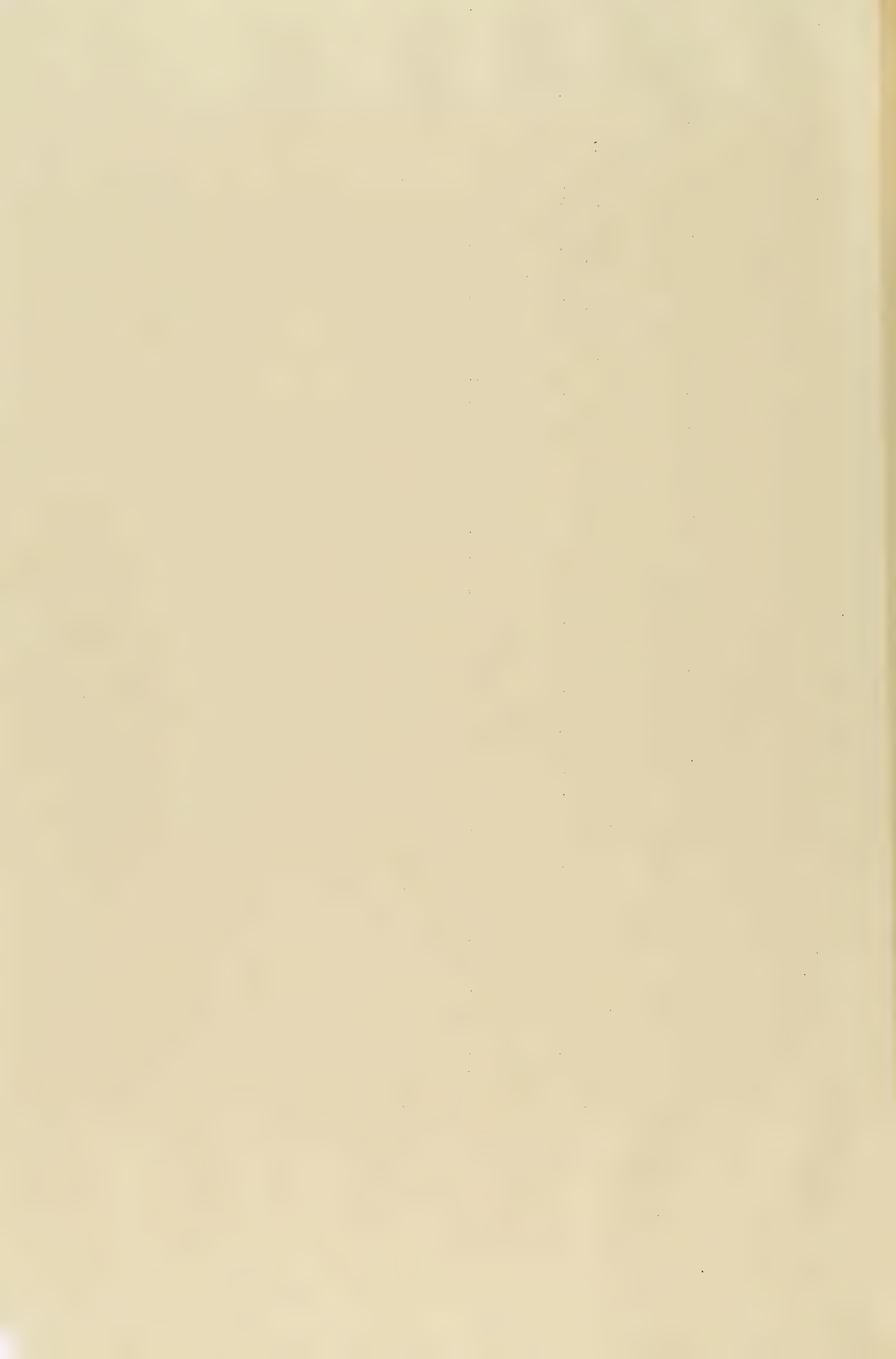
1. [illegible]
2. [illegible] hexagonum [illegible]
3. Str[illegible]tastr[illegible] longi[illegible]iata [illegible]
4. [illegible]
5. [illegible]
6. [illegible]
7. [illegible]
8. [illegible]
9. [illegible]
10. [illegible]





Lith. Anst. v. J. Lehnhardt in Mainz. Wiesbaden, Verlag von Kreidel & Niedner. A. Kolb lith.

1. *Haliserites Dechenianus*, Goepp.
2. *Drepanophycus spinaeformis*, id.
3. *Confervites acicularis*, id.
4. *Sphaerococcites lichenoides*, id.
5. *Calamites cannaeformis*, v. Schloth.
6. *Sphenopteris petiolata* id.
7. *Odontopteris imbricata* id.
8. *Sagenaria depressa*, id.





Lith. Anst. v. J. Lehnhardt in Mainz. Wiesbaden, Verlag v. Kreidel & Niedner. A. Kolb lith.

1. *Calamites transitionis*, Goepp.
2. *Anarthrocanna stigmarioides*, id.
3. *Noeggerathia tenuistriata*, id.
4. ———— *dichotoma*, id.
5. *Noeggerathia dichotoma*, Goepp.
6. *Sphenopteris pachyrrhachis*, Goepp. var. *stenophylla*
7. ead. *typus*.
8. *Sagenaria crassifolia*, id.





